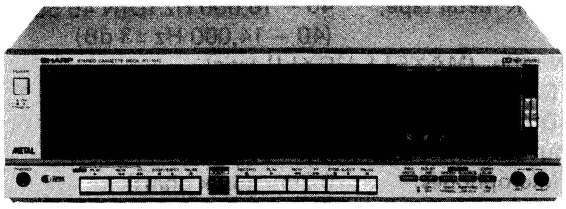
SHARP

SERVICE MANUAL/SERVICE-ANLEITUNG/MANUEL DE SERVICE

S2403RT-1010H



RT-1010H(S)

DOLBY SYSTEM ®

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- In the interests of user-safety the set should be restored to its original condition and only parts identical to those specified be used.
- Im Interesse der Benutzer-Sicherheit sollte dieses Gerät wieder auf seinen ursprünglichen Zustand eingestellt und nur die vorgeschriebenen Teile verwendet werden.
- Dans l'intérêt de la sécurité de l'utilisateur, l'appareil devra être reconstitué dans sa condition première et seules des pièces identiques à celles spécifiées, doivent être utilisées.

Note for users in UK
Recording and playback of any material may require consent which SHARP are unable to give. Please refer particularly to the provisions of Copyright Act 1956, the Dramatic and Musical Performers Protection Act 1958, the Performers Protection Acts 1963 and 1972 and to any subsequent statutory enactments and orders.

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SHARP CORPORATION OSAKA, JAPAN

RT-1010H(S)

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FOR A COMPLETE DESCRIPTION OF THE OPERATION OF THIS UNIT, PLEASE REFER TO THE OPERATION MANUAL.

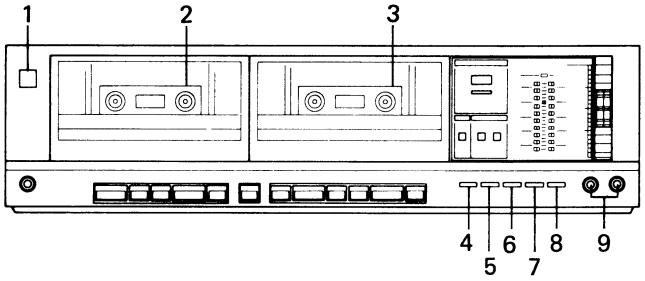
SPECIFICATIONS

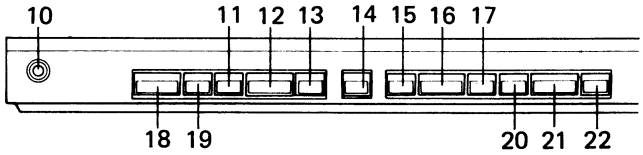
Power source:	AC 110V/127V/220V/240V, 50/60Hz
Power consumption:	14W
Semiconductors:	7 ICs
	40 Transistors
	32 Diodes
	11 LEDs
Dimensions:	Width; 430mm (17")
	Height; 118mm (4-5/8")
	Depth; 211mm (8-5/16")
Weight;	3.7 kg (8.2 lbs.)
Tape:	Compact cassette tape
Tape speed:	4.75cm/sec. (1-7/8 ips.)
	9.5cm/sec. (3-3/4 ips.)
	(during high speed dubbing)
Wow & flutter:	0.07% (WRMS)
	±0.2% (DIN 45 500)
Frequency response:	
Normal tape;	40 – 13,000 Hz (DIN 45 500)
	(40 – 12,500 Hz ± 3 dB)
MAXELL UDXLII tape;	40 – 14,000 Hz (DIN 45 500)
	(40 – 13,000 Hz ±3 dB)
TDK Metal tape;	40 – 16,000 Hz (DIN 45 500)
	(40 – 14,000 Hz ±3 dB)
S/N ratio: (MAXELL UDXLII tape)	
Dolby NR off;	56 dB
Dolby NR effect;	10 dB (at over 5 kHz)
Input sensitivity and input impedance:	
Microphones;	0.2mV (6.8k ohms)
Line In;	50mV (50k ohms)
DIN In;	6.8mV (6.8k ohms)
Output level and loaded impedance:	
Headphones;	0.2mW ("0" dB), 8 ohms
Line Out;	550mV ("0" dB), 50k ohms
DIN Out;	550mV ("0" dB), 50k ohms

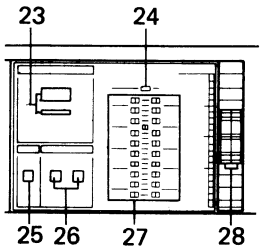
Specifications for this model are subject to change without prior notice.

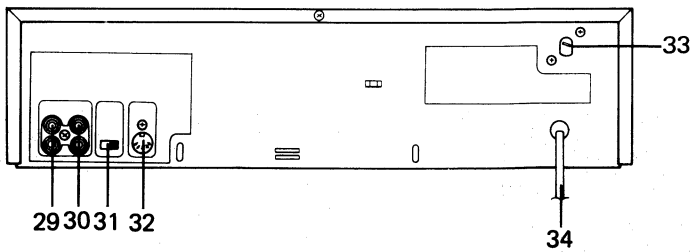
NAMES OF PARTS

1. Power Switch
2. Deck 1: Cassette Compartment
3. Deck 2: Cassette Compartment
4. Deck 2: Record Muting Button
5. Dolby NR Switch
6. Dubbing Speed Selector Switch
7. Source Selector Switch
8. Continuous Playback Switch
9. Microphone Sockets
10. Headphones Socket
11. Deck 1: Fast Forward Button
12. Deck 1: Stop/Eject Button
13. Deck 1: Pause Button
14. Dubbing Start Button
15. Deck 2: Record Button
16. Deck 2: Play Button
17. Deck 2: Rewind Button
18. Deck 1: Play Button
19. Deck 1: Rewind Button
20. Deck 2: Fast Forward Button
21. Deck 2: Stop/Eject Button
22. Deck 2: Pause Button
23. Deck 2: Digtal Tape Counter and Reset Button
24. Power Indicator
25. Deck 1: Tape 1 Selector Switch
26. Deck 2: Tape 2 Selector Switches
27. Record Level Meter
28. Record Level Controls
29. Line Output Sockets
30. Line Input Sockets
31. Input Selector Switch
32. DIN Record/Playback (Input/Output) Socket
33. AC Voltage Selector
34. AC Power Supply Cord









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EINE VOLLSTÄNDIGE BESCHREIBUNG DER BEDIENUNG DIESES GERÄTES IST IN DER BEDIENUNGSANLEITUNG ENTHALTEN.

TECHNISCHE DATEN

Spannungsversorgung: Netzspannung 110V/127V/220V/240V, 50/60Hz
Leistungsaufnahme: 14W
Bestückung: 7 integrierte Schaltkreise
40 Transistoren
32 Dioden
11 Leuchtdioden
Abmessungen: Breite; 430mm
Höhe; 118mm
Tiefe; 211mm
Gewicht: 3,7 kg
Cassette: Kompaktcassette
Bandgeschwindigkeit: 4,75cm/s
9,5cm/s
(beim Uberspielen mit hoher Geschwindigkeit)
Gleichlaufschwankungen: 0,07% (WRMS)
±0,2% (DIN 45 500)
Frequenzgang:
Normalband; 40 – 13 000 Hz (DIN 45 500)
(40 – 12 500 Hz ± 3 dB)
MAXELL UDXLII-Band;
40 – 14 000 Hz (DIN 45 500)
(40 – 13 000 Hz ±3 dB)
TDK-Reineisenband; 40 – 16 000 Hz (DIN 45 500)
(40 – 14 000 Hz ±3 dB)
Rauschabstand (MAXELL UDXLII-Band):
Dolby NR Aus; 56 dB
Dolby NR Effekt; 10 dB (bei über 5 kHz)
Eingangsempfindlichkeit und -impedanz
Mikrofoneingang; 0,2mV (6,8 kOhm)
Direkteingang, 50mV (50 kOhm)
DIN-Eingang; 6,8mV (6,8 kOhm)
Ausgangspegel und Belastungsimpedanz:
Kopfhörerausgang; 0,2mW ("0" dB), 8 Ohm
Direktausgang; 550mV ("0" dB), 50 kOhm
DIN-Ausgang; 550mV ("0" dB), 50 kOhm

Die technischen Daten für dieses Modell können ohne vorherige Ankundigung Änderungen unterworfen sein.

BEZEICHNUNG

1. Netzschalter
2. Deck 1: Cassettenfach
3. Deck 2: Cassettenfach
4. Deck 2: Aufnahme-Stummschaltungstaste
5. Dolby NR-Schalter
6. Überspielgeschwindigkeits-Wahlschalter
7. Programmquellenwahlschalter
8. Dauerwiedergabeschalter
9. Mikrofonbuchsen
10. Kopfhörerbuchse
11. Deck 1: Schnellvorlauftaste
12. Deck 1: Stopp-/Auswurftaste
13. Deck 1: Pausentaste
14. Überspielstarttaste
15. Deck 2: Aufnahmetaste
16. Deck 2: Wiedergabetaste
17. Deck 2: Rückspultaste
18. Deck 1: Wiedergabetaste
19. Deck 1: Rückspultaste
20. Deck 2: Schnellvorlauftaste
21. Deck 2: Stopp-/Auswurftaste
22. Deck 2: Pausentaste
23. Deck 2: Digitales Bandzählwerk und Rückstelltaste
24. Spannungsversorgungsanzeige
25. Deck 1: Wahlschalter für Band 1
26. Deck 2: Wahlschalter für Band 2
27. Aufnahmepegelanzeige
28. Aufnahmepegelsteller
29. Ausgangsbuchsen
30. Eingangsbuchsen
31. Eingangswahlschalter
32. DIN-Anschluß für Aufnahme/Wiedergabe
33. Netzspannungswähler
34. Netzkabel

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POUR LA DESCRIPTION COMPLÈTE DU FONCTIONNEMENT DE CET APPAREIL, SE REPORTER AU MODE D'EMPLOI.

CARACTÉRISTIQUES

Alimentation: CA 110V/127V/220V/240V 50/60Hz
Consommation: 14W
Semi-conducteurs: 7 CI
40 transistors
32 diodes
11 LED
Dimensions: Largeur; 430mm
Hauteur; 118mm
Profondeur; 211mm
Poids: 3,7 kg
Bande: Bande cassette compacte
Vitesse de défilement 4,75cm/s
9,5cm/s
(Pendant l'enregistrement à grande vitesse)
Pleurage et scintillement: 0,07% (efficace) 0,2% (DIN 45 500)
Réponse de fréquence:
Bande normale; 40 à 13 000 Hz (DIN 45 500)
(40 à 12 500 Hz ± 3 dB)
Bande MAXELL UDXLII;
40 à 14 000 Hz (DIN 45 500)
(40 à 13 000 Hz ±3 dB)
Bande TDK métal; 40 à 16 000 Hz (DIN 45 500)
(40 à 14 000 Hz ±3 dB)
Rapport S/B: (Bande MAXELL UDXLII)
Dolby RB coupé; 56 dB
Effet Dolby RB; 10 dB (à plus de 5 kHz)
Sensibilité d'entrée et impédance d'entrée:
Microphones; 0,2mV (6,8 kohms)
Entrée de ligne; 50mV (50 kohms)
Entrée DIN; 6,8mV (6,8 kohms)
Niveau de sartie et impédance de charge:
Casque; 0,2mW ("0" dB), 8 ohms
Sortie de ligne; 550mV ("0" dB), 50 kohms
Sortie DIN; 550mV ("0" dB), 50 kohms

Les caractéristiques de ce modèle sont sujettes à modification sans préavis.

NOMENCLATURE

1. Commutateur d'alimentation
2. Platine 1: Compartiment de la cassette
3. Platine 2: Compartiment de la cassette
4. Platine 2: Bouton de réglage silencieux d'enregistrement
5. Commutateur Dolby NR
6. Commutateur de sélection de vitesse de copie
7. Commutateur de sélection de source
8. Commutateur de lecture continue
9. Douilles de microphones
10. Douille de casque
11. Platine 1: Bouton d'avance rapide
12. Platine 1: Bouton d'arrêt/éjection
13. Platine 1: Bouton de pause
14. Bouton de démarrage de copie
15. Platine 2: Bouton d'enregistrement
16. Platine 2: Bouton de lecture
17. Platine 2: Bouton de rebobinage
18. Platine 1: Bouton de lecture
19. Platine 1: Bouton de rebobinage
20. Platine 2: Bouton d'avance rapide
21. Platine 2: Bouton d'arrêt/éjection
22. Platine 2: Bouton de pause
23. Platine 2: Compteur numénque de bande et bouton de remise à zéro
24. Témoin d'alimentation
25. Platine 1: Commutateur de sélection de bande 1
26. Platine 2: Commutateurs de sélection de bande 2
27. Compteur de niveau d'enregistrement
28. Commandes de niveau d'enregistrement
29. Douilles de sortie de ligne
30. Douilles d'entrée de ligne
31. Commutateur de sélection d'entrée
32. Douille DIN d'enregistrement/lecture (entrée/sortie)
33. Sélecteur de tension de secteur
34. Fil d'alimentation de secteur

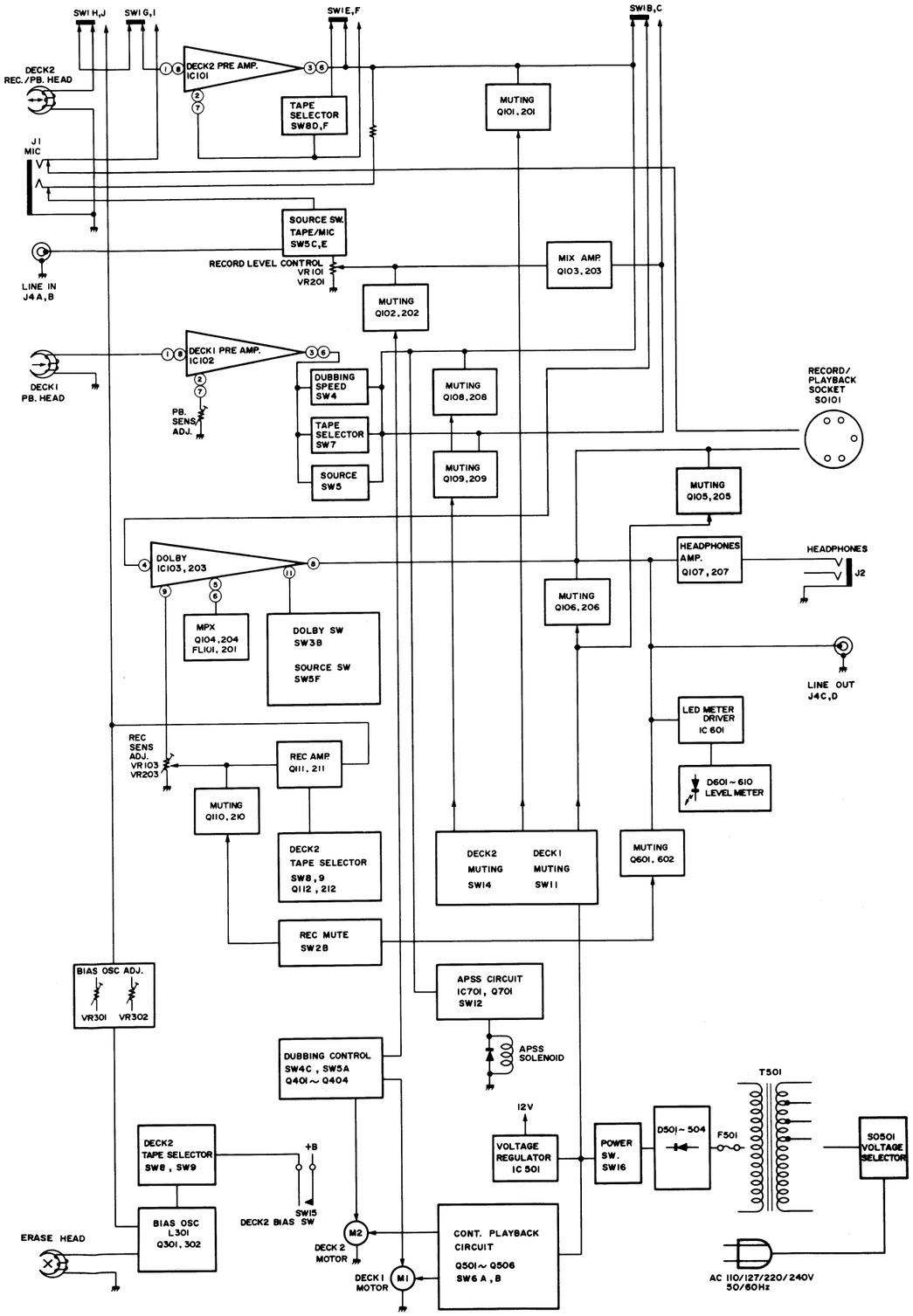

Figure 5 BLOCK DIAGRAM

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DISASSEMBLY

Caution on Disassembly
Follow the below-mentioned notes when disassembling the unit and reassembling it, to keep its safety and excellent performance:

1. Take cassette tape out of the cassette holder.
2. Be sure to remove the power supply plug from the wall outlet before starting to disassemble the unit.
3. Take off nylon bands or wire holders where they need be removed when disassembling the unit. After servicing the unit, be sure to rearrange the leads where they were before disassembling.
4. Take sufficient care on static electricity of integrated circuits and other circuits when servicing.

STEP	REMOVAL	PROCEDURE (PARTS TO BE REMOVED)	FIGURE
1	Cabinet	1. Screw . . . . . (A)x5	6–1
2	Front panel	1. Rod . . . . . (B)x1 2. Switch Lever . . (C)x3 3. Socket . . . . . (D)x6	6–2
		4. Screw . . . . . (E)x6	6–3
3	Cassette deck mechanism	1. Counter Belt . . (F)x1	6–4
		2. Screw . . . . . (G)x9	6–3 6–4 6–5

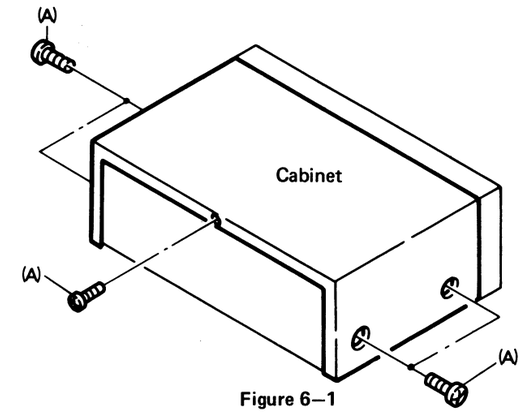

Figure 6–1

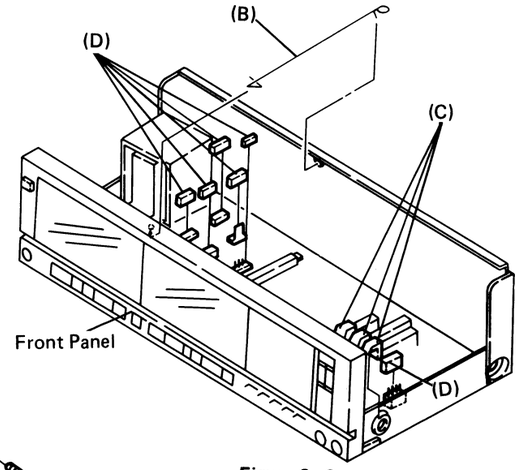

Figure 6–2

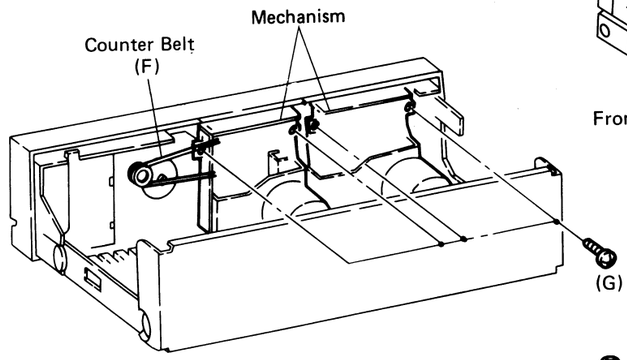

Figure 6–4

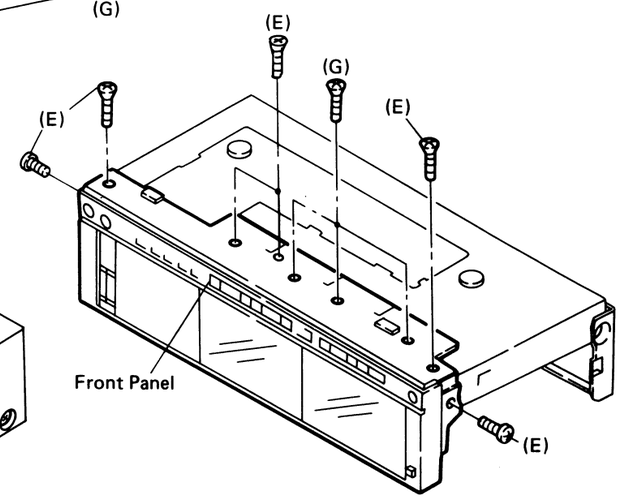

Figure 6–3

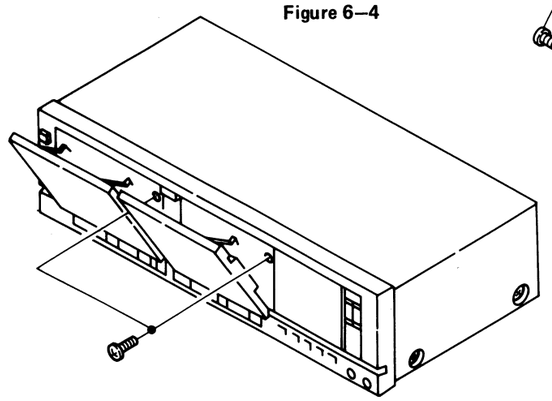

Figure 6–5

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ZERLEGEN

Vorsichtsmassregeln für das zerlegen

Beim Zerlegen und Zusammenbauen des Gerätes die folgenden Anweisungen befolgen, um dessen Betriebssicherheit und ausgezeichnete Leistung aufrechtzuerhalten.

1. Cassette aus dem cassettenhalter entfernen.
2. Bevor mit dem Zerlegen des Gerätes begonnen wird, unbedingt den Netzkabelstecker aus der Netzsteckdose ziehen.
3. Nylonbänder oder Leitungshalter entfernen, falls dies beim Zerlegen des Gerätes erforderlich ist. Nach Warten des Gerätes darauf achten, die Leitungen wieder so zu verlegen, wie sie vor dem Zerlegen angeordnet waren.
4. Beim Ausführen von Wartungsarbeiten auf statische Elektrizität der integrierten Schaltkreise und anderen Schaltungen achten.

SCHRITT	ENTFERNEN	VERFAHREN (ZU ENTFERNENDE TEILE)	ABBILDUNG
1	Gehäuse	1. Schraube . . . . . (A)x5	6–1
2	Frontplatte	1. Stab . . . . . (B)x1 2. Schalterhebel . . (C)x3 3. Buchse . . . . . (D)x6	6–2
		4. Schraube . . . . . (E)x6	6–3
3	Cassettendeck-laufwerk	1. Zählwerkriemen . (F)x1	6–4
		2. Schraube . . . . . (G)x9	6–3 6–4 6–5

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DÉMONTAGE

Précautions pour le démontage

Lors du démontage de l'appareil et de son remontage, suivre les précautions ci-dessous, pour maintenir la sécurité et d'excellentes performances.

1. Déposer la bande cassette du porte-cassette
2. S'assurer de retirer la fiche d'alimentation secteur de la prise murale avant de démarrer le démontage de l'appareil.
3. Déposer les bandes de nylon ou les serre-câbles si nécessaire lors du démontage de l'appareil. Après la réparation de l'appareil, s'assurer de redisposer les fils tel qu'ils étaient avant le démontage.
4. Faire attention à l'électricité statique des circuits intégrés et des autres circuits lors de la réparation.

ÉTAPE	DÉPOSE	PROCÉDÉ (PIÈCES À DÉPOSER)	FIGURE
1	Coffret	1. Vis . . . . . (A)x5	6–1
2	Panneau avant	1. Barre . . . . . (B)x1 2. Levier de commutateur . (C)x3 3. Douille . . . . . (D)x6	6–2
		4. Vis . . . . . (E)x6	6–3
3	Mécanisme du magnétophone	1. Courroie de compteur . . . . (F)x1	6–4
		2. Vis . . . . . (G)x9	6–3 6–4 6–5

WIRING OF PRIMARILY SUPPLY LEADS (For UK)

If any one of the nylon bands shown in the Fig. 8–1 is removed for some reason, be sure to replace it to the original position and the same appearance as before.

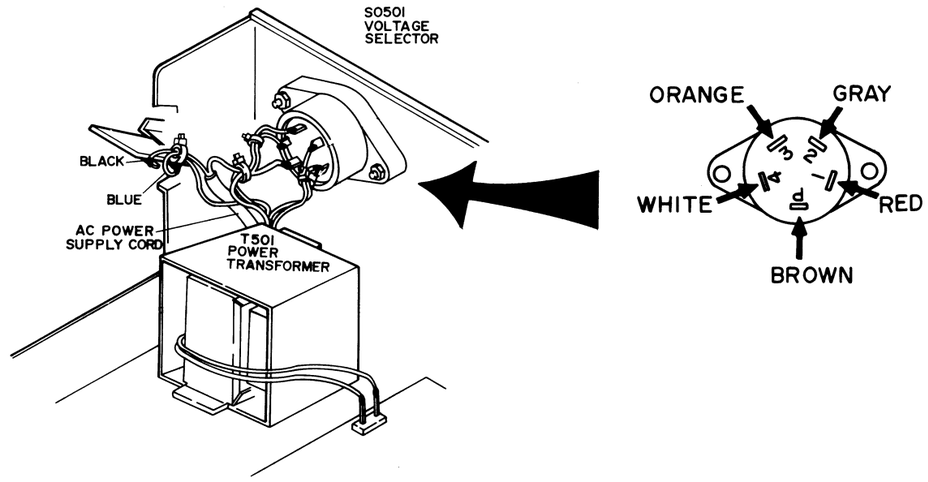

Figure 8–1

PACKING METHOD (For UK)

SETTING POSITIONS OF SWITCHES AND KNOBS	
Power Switch	OFF
Tape 1 Selector Switch	120μS
Tape 2 Selector Switch	NORMAL
Record Level Control Knob	0
Record Muting Switch	OFF
Dolby NR Switch	OFF
Dubbing Speed Selector Switch	OFF
Source Selector Switch	OFF
Continuous Playback Switch	OFF
Tape Counter	"000"
Input Selector Switch	LINE
Voltage Selector	240V

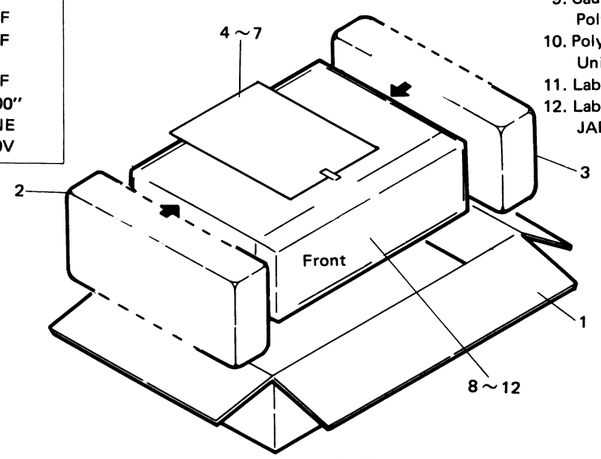

Figure 8–2

1.	Packing Case	SPAKC2871AFZZ
2.	Packing Add, Left	SPAKA1169AFZZ
3.	Packing Add, Right	SPAKA1170AFZZ
4.	Polyethylene Bag, Operation Manual	SSAKA0104AFZZ
5.	Warranty Card	TGANE1117AFZZ
6.	Connecting Cord (DIN Type)	QCNW-0727AFZZ
7.	Operation Manual	TINSZ0661AFZZ
8.	Caution Label, AC Power Supply Cord	TCAUH0056AGZZ
9.	Caution Label, Polyethylene Bag	TCAUZ0039AFZZ
10.	Polyethylene Bag, Unit	SPAKP0461AFZZ
11.	Label, License	TLABT0053AFZZ
12.	Label, MADE IN JAPAN	TLABJ0006AFZZ

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CIRCUIT ADJUSTMENT (AUDIO SECTION)

ITEM	INPUT	ADJUSTMENT POINT	REMARKS (CHECK)
SETTING POSITION OF SWITCH AND KNOB	Dolby NR Switch: off Dubbing Speed: Normal Deck 1 Tape Selector Switch: 120μs Deck 2 Tape Selector Switch: Normal Source Switch: LINE		
BIAS OSCILLATION FREQUENCY	–	L301	105 ± 5 kHz
BIAS CURRENT	–	L: VR301 R: VR302	Normal: 15.5V (Metal: 32.5 ± 3.5V) (CrO_2: 22.0 ± 2.5V)
ERASE CURRENT	–	–	Metal: 36 ± 4V
LEVEL METER SENSITIVITY	400 Hz, −10 dB (1 V = 0 dB)	–	1. Adjust the record level control knobs so that the electronic voltmeter reads 410 mV. 2. See that the segments of up to 0dB are lighting up. If the segments of up to −1dB or of up to +1dB are lighting up, take the procedures shown in the Table *1.
DECK 1 PLAYBACK SENSITIVITY	Test tape MTT-150	L: VR102 R: VR202	Normal: 505 mV
DECK 2 PLAYBACK SENSITIVITY	Test tape MTT-150	–	See that the electronic voltmeter reading is within the range from 488mV to 689mV. If not, take the procedures shown in the Table *2.
RECORD/ PLAYBACK SENSITIVITY	Non-recorded tape MTT-502 −20 dB (1 V = 0 dB)	L: VR103 R: VR203	1. Adjust the record level control knobs so that the electronic voltmeter reads 410 mV. 2. Playback the normal tape recorded and adjust the semi-variable resistor so that the electronic volt-meter reads 345 – 487 mV.

Table *1

Lighting segments	Procedures
Up to −1dB	Cut the resistor R602 or R606.
Up to +1dB	Cut the resistor R601 or R605.

Table *2

Voltmeter reads	Procedures
More than 689mV	Cut the resistor R113 or R213.
Less than 488mV	Cut the resistor R111 or R211.

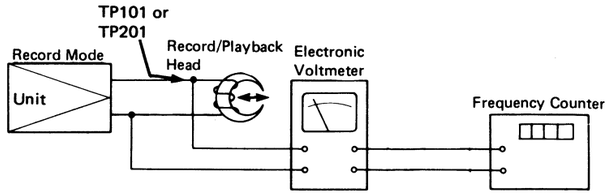

Figure 9–1 BIAS OSCILLATOR FREQUENCY/BIAS CURRENT

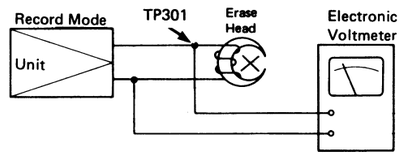

Figure 9–2 ERASE CURRENT

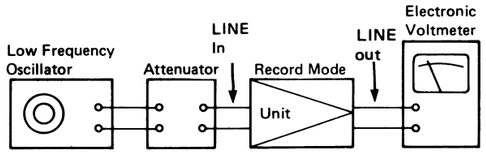

Figure 9–3 LEVEL METER SENSITIVITY

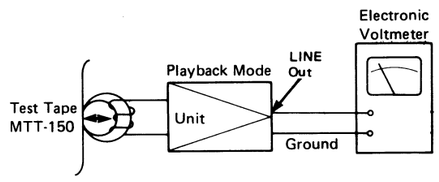

Figure 9–4 DECK 1/DECK 2 PLAYBACK SENSITIVITY

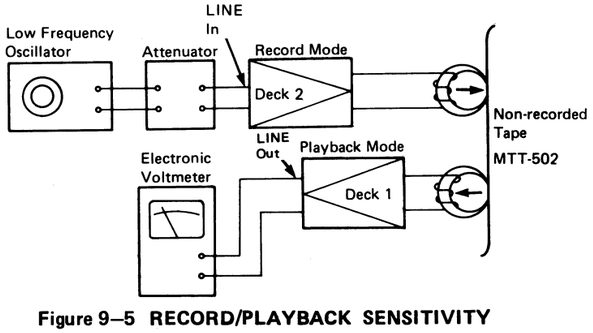

Figure 9–5 RECORD/PLAYBACK SENSITIVITY

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SCHALTUNGSEINSTELLUNG (TONTEIL)

BENNENNUNG	EINGANG	EINSTELLPUNKT	BEMERKUNGEN (PRÜFUNG)
SCHALTER- UND STELLER-EINSTELL-POSITION	Dolby-NR-Schalter: Aus Überspielgeschwindigkeit: Normal Deck 1 Wahlschalter: 120μs Deck 2 Wahlschalter: Normal Programmquellenwahlschalter: LINE		
VORMAGNETISIERUNGS-SCHWING FREQUENZ	–	L301	105 ± 5 kHz
VORMAGNETISIERUNGS-STROM	–	L: VR301 R: VR302	Normalband: 15,5V (Reineisenband: 32,5 ± 3,5V) (CrO_2 - Band: 22,0 ± 2,5V)
LÖSCHSTROM	–	–	Reineisenband: 36 ± 4V
PEGELANZEIGE-EMPFINDLICH-KEIT	400 Hz, −10 dB (1 V = 0 dB)	–	1. Die Aufnahmepegelsteller so einstellen, daß der elektronische Spannungsmesser 410 mV anzeigt. 2. Überprüfen, ob die Segmente von bis zu 0 dB aufleuchten. Wenn die Segmente von bis zu −1 dB oder von bis zu +1 dB aufleuchten, die Nachstellung gemäß Tabelle *1 vornehmen.
WIEDERGABE-EMPFINDLICH-KEIT VON DECK 1	Testband MTT-150	L: VR102 R: VR202	Normalband: 505 mV
WIEDERGABE-EMPFINDLICH-KEIT VON DECK 2	Testband MTT-150	–	Überprüfen, ob der elektronische Spannungsmesser 488 mV bis 689 mV anzeigt. Wenn es nicht so ist, die Nachstellung gemäß Tabelle *2 vornehmen.
AUFNAHME-/ WIEDERGABE-EMPFINDLICH-KEIT	Unbespieltes Band MTT-502 −20 dB (1 V = 0 dB)	L: VR103 R: VR203	1. Den Aufnahmepegelsteller so einstellen, daß der elektronische Spannungsmesser 410 mV anzeigt. 2. Das bespielte Normalband wiedergeben und den Trimmer so einsteelen, daß der elektronische Spannungsmesser 345 – 487 mV anzeigt.

Tabelle *1

Aufleuchtende Segmente	Verfahren
Bis zu −1 dB	Den Widerstand R602 oder R606 trennen.
Bis zu +1 dB	Den Widerstand R601 oder R605 trennen.

Tabelle *2

Anzeige des Spannungsmessers	Verfahren
Mehr als 689 mV	Den Widerstand R113 oder R213 trennen.
Weniger als 488 mV	Den Widerstand R111 oder R211 trennen.

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RÉGLAGE DU CIRCUIT (SECTION DU AUDIO)

ARTICLE	ENTRÉE	POINT DE RÉGLAGE	REMARQUES (VÉRIFICATION)
RÉGLAGE DE LA POSITION DES COMMUTATEURS ET DES BOUTONS	Commutateur Dolby NR: Coupé Vitesse de copie: Normale Platine 1: Commutateur de sélection: 120μs Platine 2: Commutateur de sélection: Normale Commutateur de sélection de source: LINE		
FRÉQUENCE DE L'OSCILLATION DE POLARISATION	–	L301	105 ± 5 kHz
COURANT DE POLARISATION	–	G: VR301 D: VR302	Normal: 15,5V (Metal: 32,5 ± 3,5V) (CrO_2: 22,0 ± 2,5V)
COURANT D'EFFACEMENT	–	–	Metal: 36 ± 4V
SENSIBILITÉ DU COMPTEUR DE NIVEAU	400 Hz, −10 dB (1 V = 0 dB)	–	1. Régler les boutons de niveau d'enregistrement de telle sorte que le voltmètre électronique indique 410 mV. 2. Voir si les segments au-dessus de 0 dB sont allumés. Si les segments jusqu'à −1 dB ou +1 dB sont allumés, effectuer les procédés indiqués dans le Tableau *1.
SENSIBILITÉ DE LECTURE DE LA PLATINE 1	Bande d'essai MTT-150	G: VR102 D: VR202	Normal: 505 mV
SENSIBILITÉ DE LECTURE DE LA PLATINE 2	Bande d'essai MTT-150	–	Voir si l'indication du voltmètre électronique se situe entre 488 mV et 689 mV. Sinon, effectuer les procédés indiqués dans le Tableau *2.
SENSIBILITÉ D'ENREGISTREMENT/LECTURE	Bande non enregistrée MTT-502 −20 dB (1 V = 0 dB)	G: VR103 D: VR203	1. Régler la bouton de commande de niveau du disque de telle sorte que le voltmètre électronique indique 410 mV. 2. Lire une bande normale enregistrée et régler la résistance semi-variable de telle sorte que le voltmètre électronique indique 345 à 487 mV.

Tableau *1

Segments allumés	Procédés
Jusqu'à −1 dB	Couper la résistance R602 ou R606
Jusqu'à +1 dB	Couper la résistance R601 ou R605

Tableau *2

Indication du voltmètre	Procédés
Superieure à 689 mV	Couper la résistance R113 ou R213
Inférieure à 488 mV	Couper la résistance R111 ou R211

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MECHANICAL ADJUSTMENT (TAPE SECTION)

ITEM	JIG	ADJUSTMENT POINTS	REMARKS (CHECK)
Driving power	Tape tention measuring cassette TW-2412	—	More than 150 g
Torque	Torque meter Play TW-2111 Fast-forward TW-2231 Rewind TW-2231	—	(Play : 35-60 g-cm) (Fast-forward : 85-120 g-cm) (Rewind : 85-120 g-cm)
Azimuth	Test tape MTT-114	Azimuth adjusting screw	Sine waveform attains the maximum.
Tape speed	Test tape MTT-111	Normal speed Deck 1: VR402 Deck 2: VR404 High speed Deck 1: VR401 Deck 2: VR403	Normal speed 2,990 ± 20 Hz High speed 5,980 ± 50 Hz

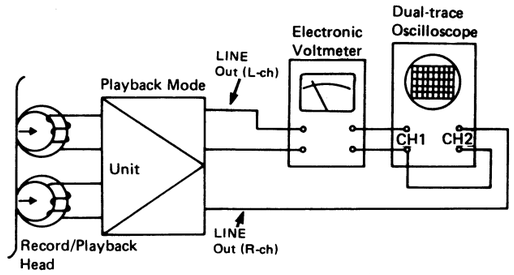

Figure 11–1 AZIMUTH

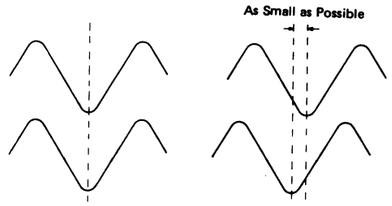

Figure 11–2 AZIMUTH WAVEFORM

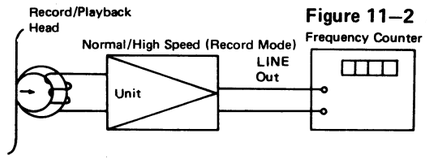

Figure 11–3 TAPE SPEED

TEST TAPES FOR MEASUREMENT

COMPACT CASSETTE TYPE			
TITLE	MODEL	FREQUENCY/ LEVEL	APPLICATION
FLUTTER	MTT-111	3 kHz, –10 dB	Tape speed, Wow and flutter check
AZIMUTH	MTT-113 MTT-113C MTT-114	6.3 kHz, –10 dB 8 kHz, –10 dB 10 kHz, –10 dB	Head azimuth adjustment
DISTORTION	MTT-118	1 kHz, –10 dB	Distortion check level adjustment
DOLBY LEVEL CALIBRATION	MTT-150	Dolby B-Type Tone 200 nwb/m	Dolby NR B-type level adjustment
BLANK	MTT-502	–	Record frequency check

TORQUE METER FOR COMPACT CASSETTE		
MODEL	MEASUREMENT RANGE	APPLICATION
TW-2111	10 – 100 g-cm	Normal : Playback torque
	1.5 – 10 g-cm	Normal : Back-tension
TW-2121	10 – 100 g-cm	Reverse : Playback torque
	1.5 – 10 g-cm	Reverse : Back tension
TW-2231	30 – 200 g-cm	Fast-forward, Rewind torque
TW-2412	0 – 300 g	Normal : Driving power
TW-2422	0 – 300 g	Reverse : Driving power

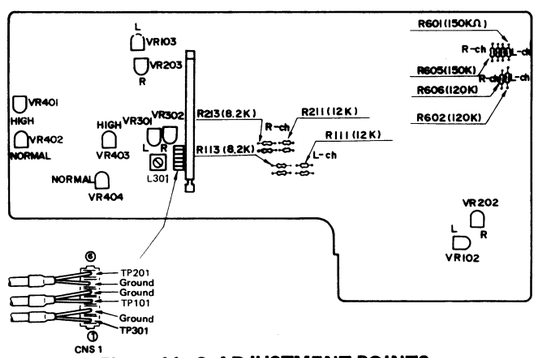

Figure 11–3 ADJUSTMENT POINTS

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MECHANISCHE EINSTELLUNG (BANDTEIL)

BE-NENNUNG	FÜHRUNG-SLEHRE	EINSTELL-PUNKT	BEMERKUNGEN (PRÜFUNG)
Antriebs-kraft	Bandzug-Meßcassette TW-2412	—	Mehr als 150 g
Dreh-moment	Drehmoment-messer Weidergabe TW-2111 Schnellvorlauf TW-2231 Rückspulung TW-2231	—	(Wiedergabe: 35 – 60 g-cm) (Schnellvorlauf: 85 – 120 g-cm) (Rückspulung: 85 – 120 g-cm)
Azimut	Testband MTT-114	Azimuteinstell-schraube	Sinuswellenform wird maximal.
Bandge-schwin-digkeit	Testband MTT-111	Normal Geschwindigkeit Deck 1: VR402 Deck 2: VR404 Hohe Geschwindigkeit Deck 1: VR401 Deck 2: VR403	Normal Geschwindigkeit 2 990 ± 20 Hz Hohe Geschwindigkeit 5 980 ± 50 Hz

TESTBÄNDER FÜR MESSUNG

KOMPAKTCASSETTENTYP			
BENENNUNG	MODELL	FREQUENZ/ PEGEL	ANWENDUNG
GLEICHLAUF-SCHWANK-UNGEN	MTT-111	3 kHz, –10 dB	Überprüfung der Bandgesch-windigkeit und Gleichlauf-schwankungen
AZIMUT	MTT-113 MTT-113C MTT-114	6,3 kHz, –10 dB 8 kHz, –10 dB 10 kHz, –10 dB	Kopfazimutein-stellung
KLIRR-FAKTOR	MTT-118	1 kHz, –10 dB	Verzerrungs-pegeleinstellung
DOLBY-PEGEL-EICHUNG	MTT-150	Ton von Dolby B-Typ 200 nwb/m	Dolby-NR B-Typ-Pegelein-stellung
LEER-CASSETTE	MTT-502	–	Überprüfung der Aufnahme-frequenz

TESTBÄNDER

DREHMOMENTMESSER FÜR KOMPAKTCASSETTE		
MODELL	MESSBEREICH	ANWENDUNG
TW-2111	10 – 100 g-cm	Normal : Wiedergabedrehmoment
	1,5 – 10 g-cm	Normal : Rückzug
TW-2121	10 – 100 g-cm	Rücklauf : Wiedergabedrehmoment
	1,5 – 10 g-cm	Rücklauf : Rückzug
TW-2231	30 – 200 g-cm	Schnellvorlauf-, Rückspul-drehmoment
TW-2412	0 – 300 g	Normal : Antriebskraft
TW-2422	0 – 300 g	Rücklauf : Antriebskraft

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RÉGLAGE MÉCANIQUE (SECTION DU MAGNÉTOPHONE)

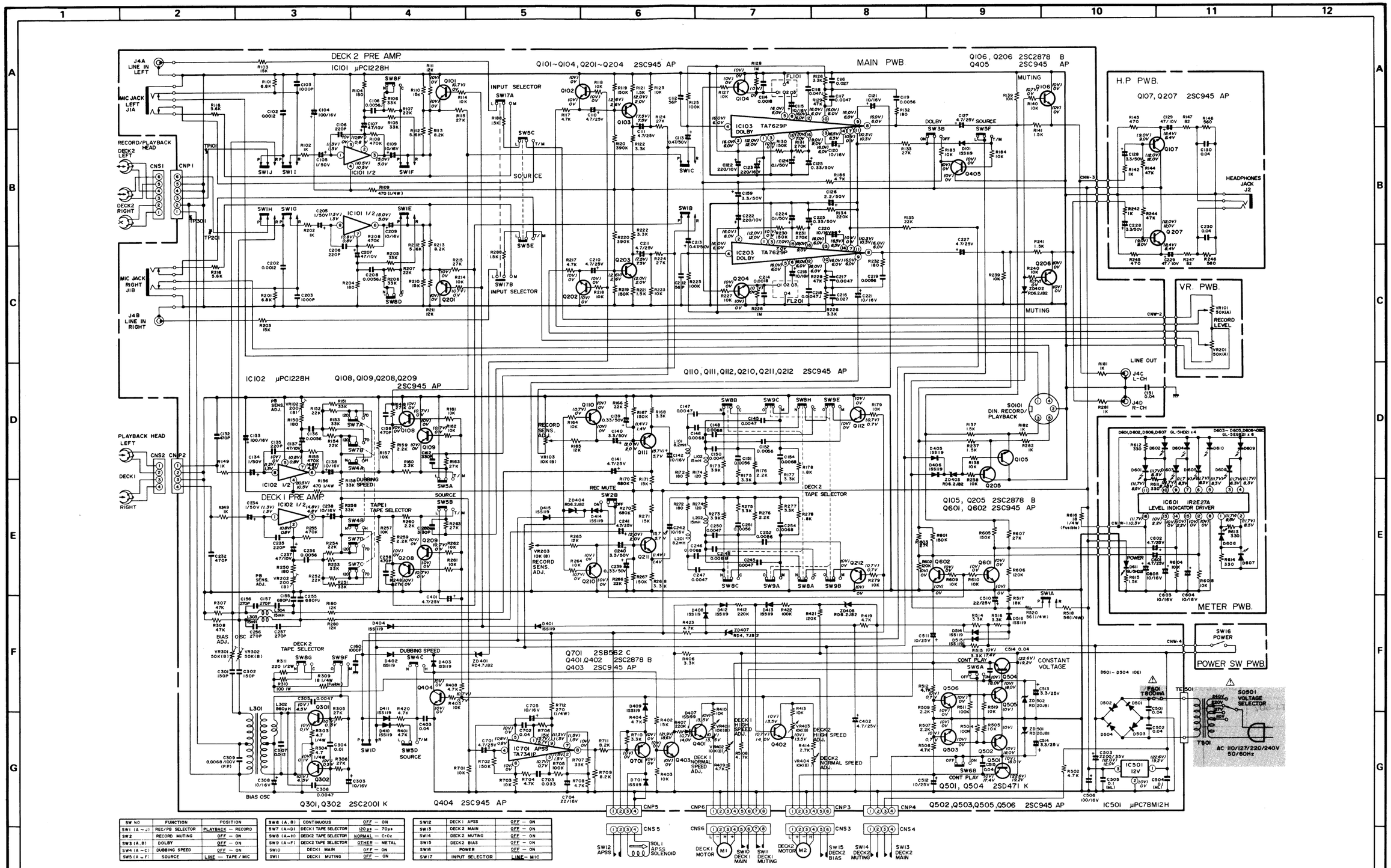
ARTICLE	GABARIT	POINTS DE RÉGLAGE	REMARQUES (VÉRIFICATION)
Puissance d'entraîne-ment	Cassette de mesure de tension de la bande TW-2412	–	Plus de 150 g
Couple	Compteur de couple Lecture: TW-2111 Avance rapide: TW-2231 Rebobinage: TW-2231	–	(Lecture: 35 à 60g-cm) (Avance rapide: 85 à 120 g-cm (Rebobinage: 85 à 120 g-cm
Azimuth	Bande d'essai MTT-114	Vis de réglage de l'azimuth	La forme d'onde sinusoïdale atteint le maximum.
Vitesse de la bande	Bande d'essai MTT-111	Vitesse normale Platine 1: VR402 Platine 2: VR404 Grande vitesse Platine 1: VR401 Platine 2: VR403	Vitesse normale 2 990 ± 20 Hz Grande vitesse 5 980 ± 50 Hz

BANDES D'ESSAI POUR MESURAGE

TYPE CASSETTE COMPACTE			
TITRE	MODÈLE	FRÉQUENCE/ NIVEAU	APPLICATION
PLEURAGE	MTT-111	3 kHz, –10 dB	Vérification de la vitesse de bande et du pleurage et scintillement
AZIMUTH	MTT-113 MTT-113C MTT-114	6,3 kHz, –10 dB 8 kHz, –10 dB 10 kHz, –10 dB	Réglage de l'azimuth de la tête
DISTORSION	MTT-118	1 kHz, –10 dB	Réglage de niveau de distorsion
CALIBRAGE DU NIVEAU DOLBY	MTT-150	Tonalité Dolby type B, 200 nwb/m	Réglage du niveau type B Dolby NR
ESPACE VIERGE	MTT-502	–	Vérification de la fréquence d'enregistrement

BANDES D'ESSAI

JAUGE DE COUPLE POUR CASSETTE COMPACTE		
MODÈLE	GAMME DE MESURE	APPLICATION
TW-2111	10 – 100 g-cm	Normal : Lecture d'enroulement
	1,5 – 10 g-cm	Normal : Tension arrière
TW-2121	10 – 100 g-cm	Retour : Lecture d'enroulement
	1,5 – 10 g-cm	Retour : Tension arrière
TW-2231	30 – 200 g-cm	Couple d'avance rapide et de rebobinage
TW-2412	0 – 300 g	Normal : Puissance d'entraînement
TW-2422	0 – 300 g	Retour : Puissance d'entraînement



SW NO	FUNCTION	POSITION
SW1 (A ~ J)	REC/PB SELECTOR	PLAYBACK — RECORD
SW2	RECORD MUTING	OFF — ON
SW3 (A, B)	DOLBY	OFF — ON
SW4 (A ~ C)	DUBBING SPEED	OFF — ON
SW5 (A ~ F)	SOURCE	LINE — TAPE / MIC

SW6 (A, B)	CONTINUOUS	OFF — ON
SW7 (A~D)	DECK1 TAPE SELECTOR	120 μs — 70 μs
SW8 (A~H)	DECK2 TAPE SELECTOR	NORMAL — CrO2
SW9 (A~F)	DECK2 TAPE SELECTOR	OTHER — METAL
SW10	DECK1 MAIN	OFF — ON
SW11	DECK1 MUTING	OFF — ON

SW12	DECK1 APSS	OFF — ON
SW13	DECK2 MAIN	OFF — ON
SW14	DECK2 MUTING	OFF — ON
SW15	DECK2 BIAS	OFF — ON
SW16	POWER	OFF — ON
SW17	INPUT SELECTOR	LINE — MIC

- NOTES ON SCHEMATIC DIAGRAM can be found on page 17.
- ANMERKUNGEN ZUM SCHEMATISCHEN SCHALTPLAN stehen auf Seite 18.
- REMARQUES CONCERNANT LE DIAGRAMME SCHEMATIQUE sont indiquées à la page 18.

Figure 13 SCHEMATIC DIAGRAM

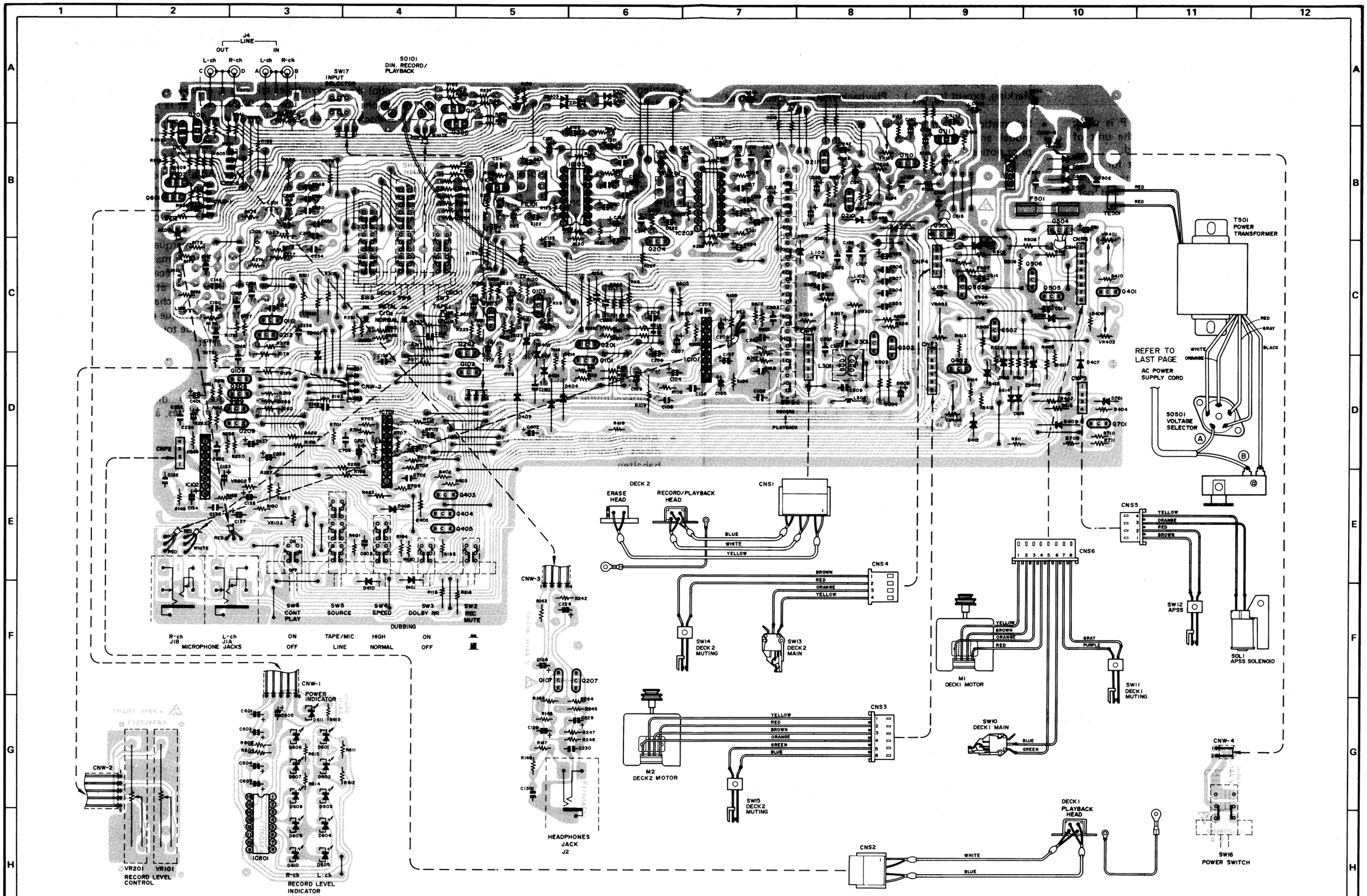


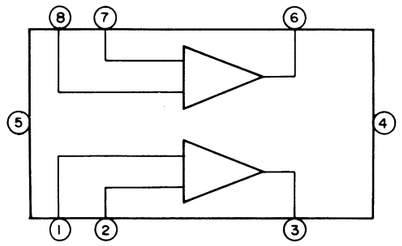
Figure 15 WIRING SIDE OF P.W.BOARD

NOTES ON SCHEMATIC DIAGRAM

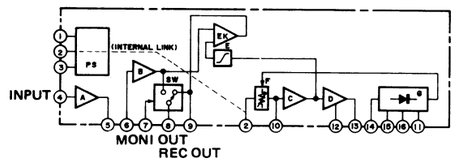
- Resistor:
  To differentiate the units of resistors, such symbols as K and M are used: the symbol K means 1000 ohm and the symbol M means 1000K ohm and the resistor without any symbols is ohm-type resistor.
- Capacitor:
  To indicate the unit of capacitor, a symbol P is used; this symbol P means micro-microfarad and the unit of the capacitor without a such symbol is microfarad.
  Parts marked with "⚠" (▓▓) are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.
- The indicated voltage in each section is the one measured by electronic voltmeter between such a section and the chassis with no signal given.
  ( ) : Stop mode
  Marking, except for ( ) : Playback mode at Deck 1 and record mode at Deck 2
- Schematic diagram and wiring side of P.W.Board for this model are subject to change for improvement without prior notice.

EQUIVALENT CIRCUIT (BLOCK DIAGRAM) OF IC

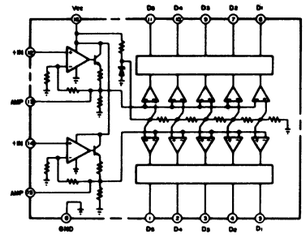
IC101, 102; VHIUPC1228H-1



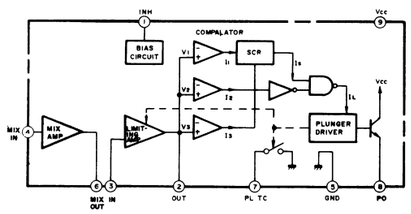
IC103, 203; VHITA7629P/-1



IC601; VHIIR2E27A/-1



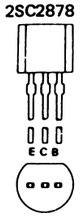
IC701; VHITA7341P/-1



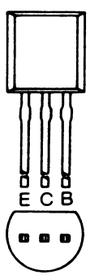
TYPES OF TRANSISTOR AND LED

2SC2001 K
2SC945 AP

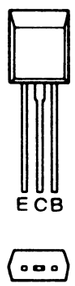
2SC2878 B



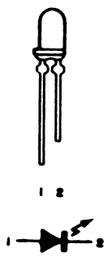
2SD562 C



2SD471 K



GL-5HD21
GL-5EG821



(D) ANMERKUNGEN ZUM SCHEMATISCHEN SCHALTPLAN

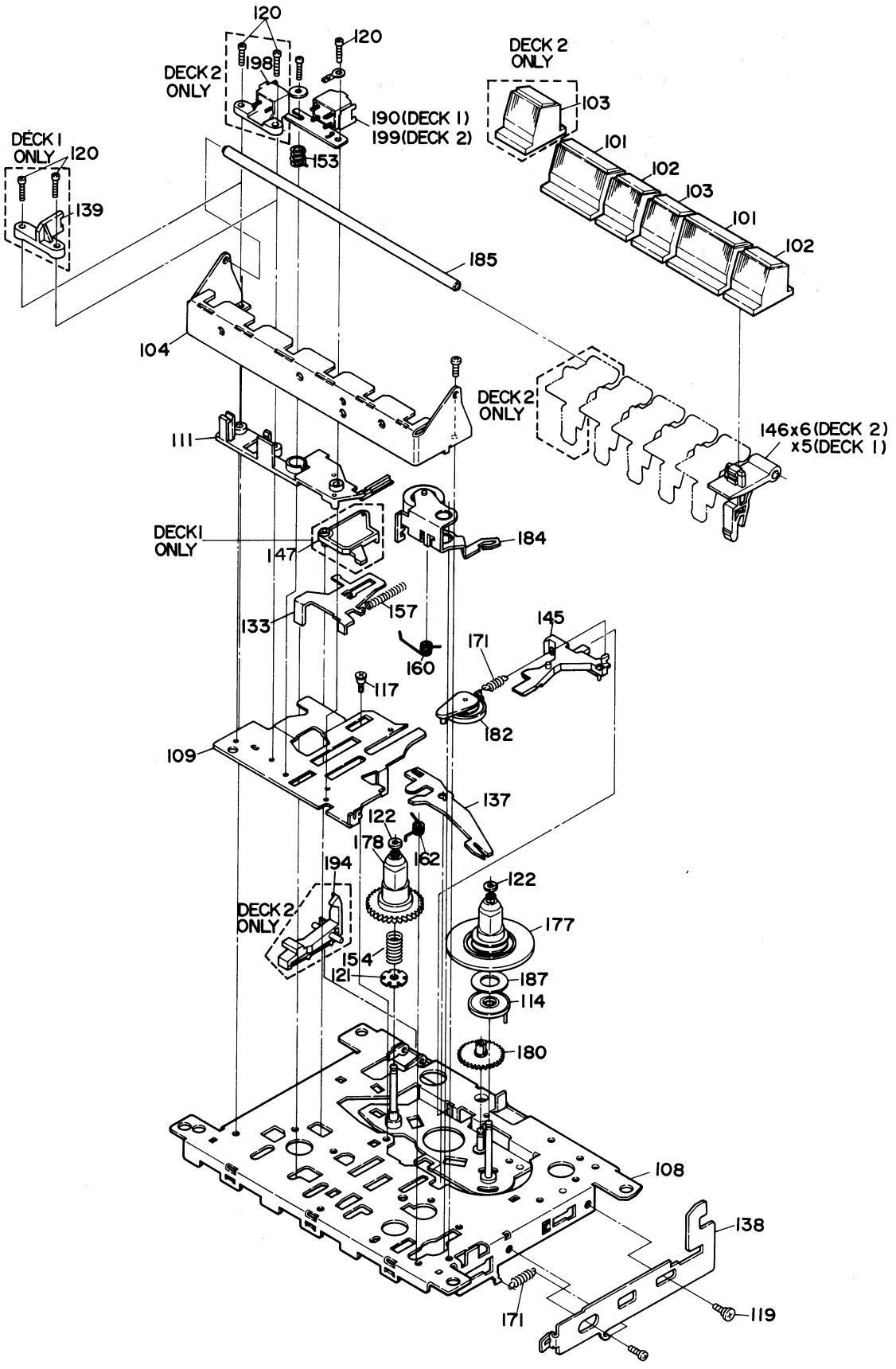
Widerstände:
Um die Einheiten der Widerstände unterscheiden zu können, werden Symbole wie K und M benutzt. Das Symbol K bedeutet 1 000 Ohm und das Symbol M 1 000 Kilo ohm; Bei Widerständen ohne Symbol handelt es sich um ohmsche Widerstände. Außerdem sind die mit "Fusible" bezeichneten Widerstände Schmelzsicherungstypen.
Kondensatoren:
Zum Bezeichnen der Kondensatoreinheit wird das Symbol P benutzt; dieses Symbol P bedeutet Nanofarad. Die Einheit eines Kondensators ohne Symbol ist Mikrofarad. Für Elektrolytkondensatoren wird die Bezeichnung "Kapazität/-Stehspannung" benutzt.

- Die mit ⚠ (▓▓) bezeichneten Teile sind besonders wichtig für die Aufrechterhaltung der Sicherheit. Beim Wechseln dieser Teile sollten die vorgeschriebenen Teile immer verwendet werden, um sowohl die Sicherheit als auch die Leistung des Gerätes aufrechtzuerhalten.
- Die in den einzelnen Teilen angegebenen Spannungen werden mit einem elektronischen Voltmeter zwischen dem betreffenden Teil und dem Chassis ohne Signalzuleitung gemessen.
  ( ) : Stopp-Betriebsart
  Kennzeichnung außer ( ) : Deck 1 in der Wiedergabe-Betriebsart und Deck 2 in der Aufnahme-Betriebsart
- Änderungen der technischen Daten oder Verdrahtungspläne dieses Modells im Sinne der Verbesserung jederzeit vorbahalten.

(F) REMARQUES CONCERNANT LE DIAGRAMME SCHEMATIQUE

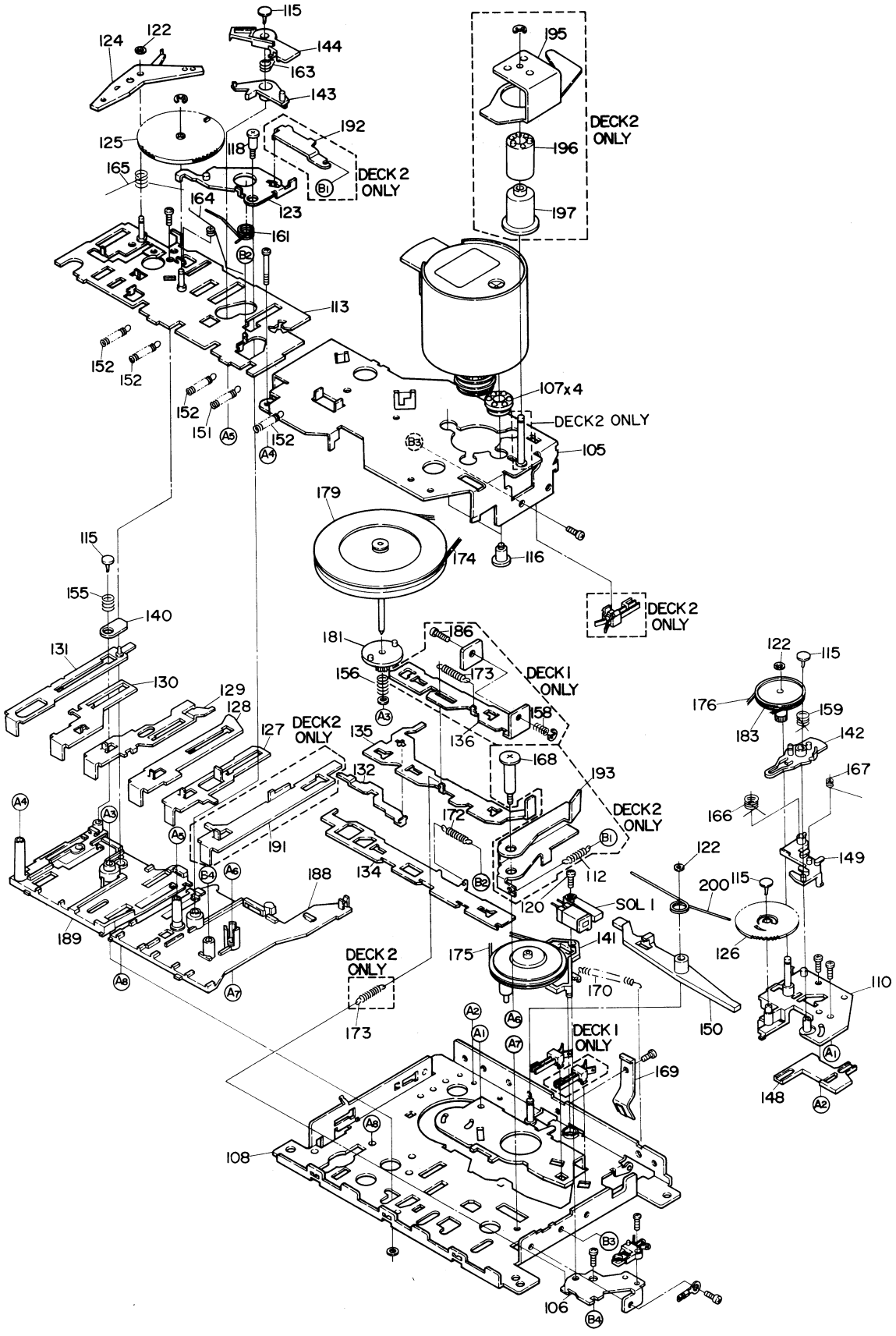
Résistance:
Pour différencier les unités de résistances, on utilise des symboles tels que K et M: le symbole K signifie 1000 ohms, le symbole M 1000 Kohms, et la résistance donnée sans symbole est une résistance de type ohm. En outre, celle qui est dotées de "Fusible" est de type à fusible.
Condensateur:
Pour indiquer l'unité de condensateur, on utilise le symbole P; ce symbole P signifie micro-microfarad, et l'unité de condensateur donnée sans ce symbole est le microfarad. En ce qui concerne le condensateur électrolytique, on utilise l'expression "tension de régime/capacité";

- Les pièces portant la marque ⚠ (▓▓) sont particulièrement importantes pour le maintien de la sécurité. S'assurer de les remplacer par des pièces du numéro de prèce spécifié pour maintenir la sécurité et la performance de l'appareil.
- La tension indiquée dans chaque section est celle mesurée par le voltmètre électronique entre la section en question et le châssis, en l'absence de tout signal.
  ( ) : Mode d'arrêt
  Marque sauf pour ( ) : Mode de lecture à la platine 1 et mode d'enregistrement à la platine 2
- Les caractéristiques ou diagrammes de câblage sont susceptibles d'être modifiés, à des fins d'amélioration, sans aucun préavis.



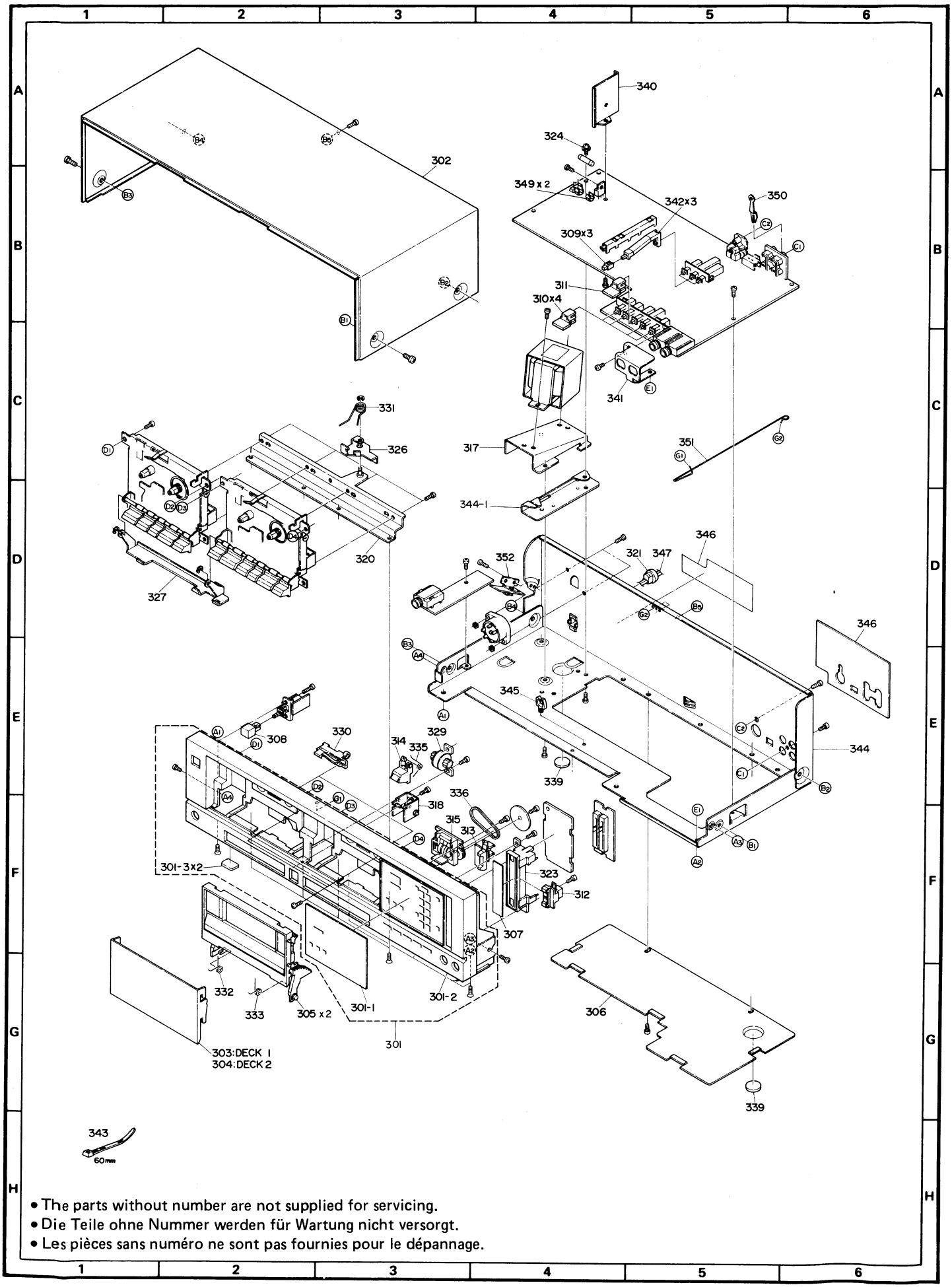
- The parts without number are not supplied for servicing.
- Die Teile ohne Nummer werden für Wartung nicht versorgt.
- Les pièces sans numéro ne sont pas fournies pour le dépannage.

Figure 19 CABINET EXPLODED VIEW



- The parts without number are not supplied for servicing.
- Die Teile ohne Nummer werden für Wartung nicht versorgt.
- Les pièces sans numéro ne sont pas fournies pour le dépannage.

Figure 20 MECHANISM EXPLODED VIEW (1/2)



- The parts without number are not supplied for servicing.
- Die Teile ohne Nummer werden für Wartung nicht versorgt.
- Les pièces sans numéro ne sont pas fournies pour le dépannage.

Figure 21 MECHANISM EXPLODED VIEW (2/2)

Ⓔ

REPLACEMENT PARTS LIST

"HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following information.

1. MODEL NUMBER
2. REF. NO.
3. PART NO.
4. DESCRIPTION

NOTE:

Parts marked with "△" are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

Ⓓ

ERSATZTEILLISTE

"BESTELLEN VON ERSATZTEILEN"

Um Ihren Auftrag schnell und richtig ausfuhren zu können, bitten wir um die folgenden Angaben.

1. MODELLNUMMER
2. REF. NR.
3. TEIL NR.
4. BESCHREIBUNG

ANMERKUNGEN:

Die mit △ bezeichneten Teile sind besonders wichtig für die Aufrechterhaltung der Sicherheit. Beim Wechseln dieser Teile sollten die vorgeschriebenen Teile immer verwendet werden, um sowohl die Sicherheit als auch die Leistung des Gerätes aufrechtzuerhalten.

Ⓕ

LISTE DES PIÈCES DE RECHANGE

"COMMENT COMMANDER DES PIÈCES DE RECHANGE"

Pour voir votre commande exécutée de manière rapide et correcte, veuillez fournir les renseignements suivants.

1. NUMÉRO DU MODÈLE
2. N° DE RÉFÉRENCE
3. N° DE LA PIÈCE
4. DESCRIPTION

NOTE:

Les pièces portant la marque △ sont particulièrement importantes pour le maintien de la securité. S'assurer de les remplacer par des pièces du numéro de pièce spécifié pour maintenir la sécurité et la performance de l'appareil.

REF.NO.	PART NO.	DESCRIPTION	CODE
		INTEGRATED CIRCUITS	
IC101	VHIUPC1228H-1	PRE Amp. μPC1228H	AF
IC102	VHIUPC1228H-1	PRE Amp. μPC1228H	AF
IC103	VHITA7629P/-1	Dolby NR Circuit, TA7629P	AL
IC203	VHITA7629P/-1	Dolby NR Circuit, TA7629P	AL
IC501	VHIUPC78M12H1	Voltage Regulator, μPC78M12H	AK
IC601	VHIIR2E27A/-1	Level Meter Driver, IR2E27A	AK
IC701	VHITA7341P/-1	APSS Circuit, TA7341P	AG
		TRANSISTORS	
Q101	VS2SC945AP/-1	Silicon, NPN, 2SC945 AP	AB
Q102	VS2SC945AP/-1	Silicon, NPN, 2SC945 AP	AB
Q103	VS2SC945AP/-1	Silicon, NPN, 2SC945 AP	AB
Q104	VS2SC945AP/-1	Silicon, NPN, 2SC945 AP	AB
Q105	VS2SC2878B/-1	Silicon, NPN, 2SC2878 B	AC
Q106	VS2SC2878B/-1	Silicon, NPN, 2SC2878 B	AC
Q107	VS2SC945AP/-1	Silicon, NPN, 2SC945 AP	AB
Q108	VS2SC945AP/-1	Silicon, NPN, 2SC945 AP	AB
Q109	VS2SC945AP/-1	Silicon, NPN, 2SC945 AP	AB
Q110	VS2SC945AP/-1	Silicon, NPN, 2SC945 AP	AB
Q111	VS2SC945AP/-1	Silicon, NPN, 2SC945 AP	AB
Q112	VS2SC945AP/-1	Silicon, NPN, 2SC945 AP	AB
Q201	VS2SC945AP/-1	Silicon, NPN, 2SC945 AP	AB
Q202	VS2SC945AP/-1	Silicon, NPN, 2SC945 AP	AB
Q203	VS2SC945AP/-1	Silicon, NPN, 2SC945 AP	AB
Q204	VS2SC945AP/-1	Silicon, NPN, 2SC945 AP	AB
Q205	VS2SC2878B/-1	Silicon, NPN, 2SC2878 B	AC
Q206	VS2SC2878B/-1	Silicon, NPN, 2SC2878 B	AC
Q207	VS2SC945AP/-1	Silicon, NPN, 2SC945 AP	AB
Q208	VS2SC945AP/-1	Silicon, NPN, 2SC945 AP	AB
Q209	VS2SC945AP/-1	Silicon, NPN, 2SC945 AP	AB
Q210	VS2SC945AP/-1	Silicon, NPN, 2SC945 AP	AB
Q211	VS2SC945AP/-1	Silicon, NPN, 2SC945 AP	AB
Q212	VS2SC945AP/-1	Silicon, NPN, 2SC945 AP	AB
Q301	VS2SC2001-K-1	Silicon, NPN, 2SC2001 K	AB
Q302	VS2SC2001-K-1	Silicon, NPN, 2SC2001 K	AB
Q401	VS2SC2878B/-1	Silicon, NPN, 2SC2878 B	AC
Q402	VS2SC2878B/-1	Silicon, NPN, 2SC2878 B	AC
Q403	VS2SC945AP/-1	Silicon, NPN, 2SC945 AP	AB
Q404	VS2SC945AP/-1	Silicon, NPN, 2SC945 AP	AB
Q405	VS2SC945AP/-1	Silicon, NPN, 2SC945 AP	AB
Q501	VS2SD471-K/-A	Silicon, NPN, 2SD471 K	AD
Q502	VS2SC945AP/-1	Silicon, NPN, 2SC945 AP	AB
Q503	VS2SC945AP/-1	Silicon, NPN, 2SC945 AP	AB
Q504	VS2SD471-K/-A	Silicon, NPN, 2SD471 K	AD
Q505	VS2SC945AP/-1	Silicon, NPN, 2SC945 AP	AB
Q506	VS2SC945AP/-1	Silicon, NPN, 2SC945 AP	AB
Q601	VS2SC945AP/-1	Silicon, NPN, 2SC945 AP	AB
Q602	VS2SC945AP/-1	Silicon, NPN, 2SC945 AP	AB
Q701	VS2SB562-C/-1	Silicon, PNP, 2SB562 C	AD
		DIODES	
D101	VHD1SS119//-1	Silicon, 1SS119	AA
D401	VHD1SS119//-1	Silicon, 1SS119	AA
D402	VHD1SS119//-1	Silicon, 1SS119	AA
D403	VHD1SS119//-1	Silicon, 1SS119	AA
D404	VHD1SS119//-1	Silicon, 1SS119	AA
D405	VHD1SS119//-1	Silicon, 1SS119	AA
D406	VHD1SS119//-1	Silicon, 1SS119	AA
D407	VHD1SS119//-1	Silicon, 1SS119	AA
D408	VHD1SS119//-1	Silicon, 1SS119	AA
D409	VHD1SS119//-1	Silicon, 1SS119	AA
D410	VHD1SS119//-1	Silicon, 1SS119	AA
D411	VHD1SS119//-1	Silicon, 1SS119	AA
D412	VHD1SS119//-1	Silicon, 1SS119	AA
D413	VHD1SS119//-1	Silicon, 1SS119	AA
D414	VHD1SS119//-1	Silicon, 1SS119	AA
D415	VHD1SS119//-1	Silicon, 1SS119	AA
D501	VHD11E1TA2/-1	Silicon, 11E1TA2	AB
D502	VHD11E1TA2/-1	Silicon, 11E1TA2	AB
D503	VHD11E1TA2/-1	Silicon, 11E1TA2	AB
D504	VHD11E1TA2/-1	Silicon, 11E1TA2	AB
D514	VHD1SS119//-1	Silicon, 1SS119	AA
D515	VHD1SS119//-1	Silicon, 1SS119	AA
D516	VHD1SS119//-1	Silicon, 1SS119	AA
D601	VHPGL5HD21/-1	LED, Red, GL-5HD21	AC
D602	VHPGL5HD21/-1	LED, Red, GL-5HD21	AC
D603	VHPGL5EG821-1	LED, Green, GL-5EG821	AC
D604	VHPGL5EG821-1	LED, Green, GL-5EG821	AC
D605	VHPGL5EG821-1	LED, Green, GL-5EG821	AC
D606	VHPGL5HD21/-1	LED, Red, GL-5HD21	AC
D607	VHPGL5HD21/-1	LED, Red, GL-5HD21	AC
D608	VHPGL5EG821-1	LED, Green, GL-5EG821	AC
D609	VHPGL5EG821-1	LED, Green, GL-5EG821	AC
D610	VHPGL5EG82: -1	LED. Green, GL-5EG821	AC
D611	VHPGL5HD21/-1	LED, Red, GL-5HD21	AC
D701	VHD1SS119//-1	Silicon, 1SS119	AA

REF.NO.	PART NO.	DESCRIPTION	CODE
ZD401	VHERD4R7JB2-1	Zener, 4.53~4.77V/400mW, RD4.7JB2	AB
ZD402	VHERD6R2JB2-1	Silicon, Zener, 6.04~6.34V/ 400mW, RD6.2JB2	AB
ZD403	VHERD6R2JB2-1	Silicon, Zener, 6.04~6.34V/ 400mW, RD6.2JB2	AB
ZD404	VHERD6R2JB2-1	Silicon, Zener, 6.04α6.34V/ 400mW, RD6.2JB2	AB
ZD405	VHERD6R2JB2-1	Silicon, Zener, 6.04~6.34V/ 400mW, RD6.2JB2	AB
ZD407	VHERD4R7JB2-1	Zener, 4.53~4.77V/400mW, RD4.7JB2	AB
ZD501	VHERD200JB1-1	Zener, 20V, RD20JB1	AB
ZD502	VHERD200JB1-1	Zener, 20V, RD20JB1	AB

COILS

L101	RCILZ0087AFZZ	8.2mH, Record Equalizer	AC
L102	RCILZ0086AFZZ	6.8mH, Record Equalizer	AC
L201	RCILZ0087AFZZ	8.2mH, Record Equalizer	AC
L202	RCILZ0086AFZZ	6.8mH, Record Equalizer	AC
L301	RCILB0712AFZZ	Bias Oscillator	AD
L302	VP-CH561K0000	560 μH, Choke	AB
L303	RCILZ0120AFZZ	15mH, Bias Trap	AC
L304	RCILZ0120AFZZ	15mH, Bias Trap	AC

TRANSFORMER

⚠T501	RTRNP1023AFZZ	Power	AX

FILTERS

FIL101	RCILL0091AFZZ	Multiplex	AF
FIL201	RCILL0091AFZZ	Multiplex	AF

CONTROLS

VR101	RVR-P0108AFZZ	50 kohm (A), Record Level Control	AF
VR102	RVR-M0384AFZZ	200 ohm(B), Deck 1 Playback Sensitivity Adjustment	AB
VR103	RVR-M0391AFZZ	10 kohm (B), Record Sensitivity Adjustment	AB
VR201	RVR-P0108AFZZ	50 kohm (A), Record Level Control	AF
VR202	RVR-M0384AFZZ	200 ohm(B), Deck 1 Playback Sensitivity Adjustment	AB
VR203	RVR-M0391AFZZ	10 kohm (B), Record Sensitivity Adjustment	AB
VR301	RVR-M0394AFZZ	50 kohm (B), Bias Oscillator Adjustment	AB
VR302	RVR-M0394AFZZ	50 kohm (B), Bias Oscillator Adjustment	AB
VR401	RVR-M0391AFZZ	10 kohm (B), Deck1 Normal Speed Adjustment	AB
VR402	RVR-M0391AFZZ	10 kohm (B), Deck1 Normal Speed Adjustment	AB
VR403	RVR-M0391AFZZ	10 kohm (B), Deck2 Normal Speed Adjustment	AB
VR404	RVR-M0391AFZZ	10 kohm (B), Deck2 Normal Speed Adjustment	AB

ELECTROLYTIC CAPACITORS

(Unless otherwise specified electrolytic capacitors are ±20% type.)

C104	RC-EZA107AF1C	100 μF, 16V	AB
C105	VCEALA1HC105M	1 μF, 50V	AB
C107	RC-EZA476AF1A	47 μF, 10V	AB
C109	RC-EZA106AF1C	10 μF, 16V	AB
C110	RC-EZA475AF1E	4.7 μF, 25V	AB
C111	RC-EZA475AF1E	4.7 μF, 25V	AB
C113	RC-EZA474AF1H	0.47 μF, 50V	AB
C115	RC-EZA106AF1C	10 μF, 16V	AB
C120	RC-EZA106AF1C	10 μF, 16V	AB
C121	RC-EZA106AF1C	10 μF, 16V	AB
C122	RC-EZA227AF1A	220 μF, 10V	AB
C123	RC-EZA227AF1C	220 μF, 16V	AB
C124	RC-EZA104AF1H	0.1 μF, 50V	AB
C125	RC-EZA334AF1H	0.33 μF, 50V	AB
C126	RC-EZA225AF1H	2.2 μF, 50V	AB
C127	RC-EZA475AF1E	4.7 μF, 25V	AB
C128	RC-EZA335AF1H	3.3 μF, 50V	AB
C129	RC-EZA476AF1A	47 μF, 10V	AB
C133	RC-EZA107AF1C	100 μF, 16V	AB
C134	VCEALA1HC105M	1 μF, 50V	AB
C137	RC-EZA476AF1A	47 μF, 10V	AB
C138	RC-EZA106AF1C	10 μF, 16V	AB
C139	RC-EZA334AF1H	0.33 μF, 50V	AB
C140	RC-EZA335AF1H	3.3 μF, 50V	AB
C141	RC-EZA475AF1E	4.7 μF, 25V	AB
C142	RC-EZA106AF1C	10 μF, 16V	AB
C159	RC-EZA335AF1H	3.3 μF, 50V	AB
C205	VCEALA1HC105M	1 μF, 50V	AB
C207	RC-EZA476AF1A	47 μF, 10V	AB
C209	RC-EZA106AF1C	10 μF, 16V	AB
C210	RC-EZA475AF1E	4.7 μF, 25V	AB
C211	RC-EZA475AF1E	4.7 μF, 25V	AB
C213	RC-EZA474AF1H	0.47 μF, 50V	AB
C215	RC-EZA106AF1C	10 μF, 16V	AB
C220	RC-EZA106AF1C	10 μF, 16V	AB
C221	RC-EZA106AF1C	10 μF, 16V	AB
C222	RC-EZA227AF1A	220 μF, 10V	AB
C224	RC-EZA104AF1H	0.1 μF, 50V	AB
C225	RC-EZA334AF1H	0.33 μF, 50V	AB
C227	RC-EZA475AF1E	4.7 μF, 25V	AB
C228	RC-EZA335AF1H	3.3 μF, 50V	AB
C229	RC-EZA476AF1A	47 μF, 10V	AB
C234	VCEALA1HC105M	1 μF, 50V	AB
C237	RC-EZA476AF1A	47 μF, 10V	AB
C238	RC-EZA106AF1C	10 μF, 16V	AB
C239	RC-EZA334AF1H	0.33 μF, 50V	AB
C240	RC-EZA335AF1H	3.3 μF, 50V	AB
C241	RC-EZA475AF1E	4.7 μF, 25V	AB
C242	RC-EZA106AF1C	10 μF, 16V	AB
C303	RC-EZA106AF1C	10 μF, 16V	AB
C308	RC-EZA106AF1C	10 μF, 16V	AB
C401	RC-EZA475AF1E	4.7 μF, 25V	AB
C402	RC-EZA475AF1E	4.7 μF, 25V	AB
C503	RC-EZ1191AFZZ	2200 μF, 35V	AG
C506	RC-EZA107AF1C	100 μF, 16V	AB
C510	RC-EZA226AF1E	22 μF, 25V	AB
C511	RC-EZA106AF1E	10 μF, 25V	AB
C512	RC-EZA106AF1E	10 μF, 25V	AB
C513	RC-EZS335AF1H	3.3 μF, 50V	AB
C514	RC-EZS335AF1H	3.3 μF, 50V	AB
C601	RC-EZA475AF1E	4.7 μF, 25V	AB
C602	RC-EZA475AF1E	4.7 μF, 25V	AB
C603	RC-EZA106AF1C	10 μF, 16V	AB
C604	RC-EZA106AF1C	10 μF, 16V	AB
C605	RC-EZA106AF1C	10 μF, 16V	AB
C701	RC-EZA475AF1E	4.7 μF, 25V	AB
C704	RC-EZA226AF1C	22 μF, 16V	AB
C705	RC-EZA106AF1C	10 μF, 16V	AB

CAPACITORS

(The terms CM, SC and ML used here indicate the types of capacitor ceramic type, semiconductor type and mylar type.)

C102	VCTYPA1EX122J	0.0012 μF, 25V, ±5%, SC	AA

REF.NO.	PART NO.	DESCRIPTION	CODE
C103	VCTYPA1EX332J	0.0033 μF, 25V, ±5%, SC	AB
C106	VCCSPA1HL221J	220 pF, 50V, ±5%. CM	AA
C108	VCTYPA1EX562J	0.0056 μF, 25V, ±5%, SC	AA
C112	VCCSPA1HL560J	56 pF, 50V, ±5%, CM	AA
C114	VCTYPA1EX182J	0.0018 μF, 25V, ±5%, SC	AA
C116	VCTYPA1EX273J	0.027 μF, 25V, ±5%, SC	AB
C117	VCTYPA1EX472J	0.0047 μF, 25V, ±5%, SC	AA
C118	VCTYPA1EX473J	0.047 μF, 25V, ±5%, SC	AB
C119	VCTYPA1EX562J	0.0056 μF, 25V, ±5%, SC	AA
C130	VCKZPA1HF403Z	0.04 μF, 50V, +80−20%, CM	AA
C131	VCKZPA1HF403Z	0.04 μF, 50V, +80−20%, CM	AA
C132	VCCSPA1HL471J	470 pF, 50V, ±5%, CM	AA
C135	VCCSPA1HL221J	220 pF, 50V, ±5%, CM	AA
C136	VCTYPA1EX562J	0.0056 μF, 25V, ±5%, SC	AA
C145	VCTYPA1EX472J	0.0047 μF, 25V, ±5%, SC	AA
C146	VCTYPA1EX682J	0.0068 μF, 25V, ±5%, SC	AA
C147	VCTYPA1EX472J	0.0047 μF, 25V, ±5%, SC	AA
C148	VCTYPA1EX682J	0.0068 μF, 25V, ±5%, SC	AA
C150	VCTYPA1EX472J	0.0047 μF, 25V, ±5%, SC	AA
C151	VCTYPA1EX562J	0.0056 μF, 25V, ±5%, SC	AA
C152	VCTYPA1EX562J	0.0056 μF, 25V, ±5%, SC	AA
C154	VCTYPA1EX682J	0.0068 μF, 25V, ±5%, SC	AA
C155	VCCSPA1HL681J	680 pF, 50V, ±5%, CM	AA
C156	VCCSPA1HL271J	270 pF, 50V, ±5%, CM	AA
C157	VCCSPA1HL271J	270 pF, 50V, ±5%, CM	AA
C158	VCKYDT1HB471K	470 pF, 50V, ±10%, CM	AA
C160	VCKYDT1HB102K	0.001 μF, 50V, ±10%, CM	AA
C162	VCKYDT1HB331K	330 pF, 50V, ±10%, CM	AA
C202	VCTYPA1EX122J	0.0012 μF, 25V, ±5%, SC	AA
C203	VCTYPA1EX103J	0.001 μF, 25V, ±5%, SC	AA
C206	VCCSPA1HL221J	220 pF, 50V, ±5%, CM	AA
C208	VCTYPA1EX562J	0.0056 μF, 25V, ±5%, SC	AA
C212	VCCSPA1HL560J	56 pF, 50V, ±5%, CM	AA
C214	VCTYPA1EX182J	0.0018 μF, 25V, ±5%, SC	AA
C216	VCTYPA1EX273J	0.027 μF, 25V, ±5%, SC	AB
C217	VCTYPA1EX472J	0.0047 μF, 25V, ±5%, SC	AA
C218	VCTYPA1EX473J	0.047 μF, 25V, ±5%, SC	AB
C219	VCTYPA1EX562J	0.0056 μF, 25V, ±5%, SC	AA
C230	VCKZPA1HF403Z	0.04 μF, 50V, +80−20%, CM	AA
C232	VCCSPA1HL471J	470 pF, 50V, ±5%, CM	AA
C235	VCCSPA1HL221J	220 pF, 50V, ±5%, CM	AA
C236	VCTYPA1EX562J	0.0056 μF, 25V, ±5%, SC	AA
C245	VCTYPA1EX472J	0.0047 μF, 25V, ±5%, SC	AA
C246	VCTYPA1EX682J	0.0068 μF, 25V, ±5%, SC	AA
C247	VCTYPA1EX472J	0.0047 μF, 25V, ±5%, SC	AA
C248	VCTYPA1EX682J	0.0068 μF, 25V, ±5%, SC	AA
C250	VCTYPA1EX472J	0.0047 μF, 25V, ±5%, SC	AA
C251	VCTYPA1EX562J	0.0056 μF, 25V, ±5%, SC	AA
C252	VCTYPA1EX562J	0.0056 μF, 25V, ±5%, SC	AA
C254	VCTYPA1EX682J	0.0068 μF, 25V, ±5%, SC	AA
C255	VCCSPA1HL681J	680 pF, 50V, ±5%, CM	AA
C256	VCCSPA1HL271J	270 pF, 50V, ±5%, CM	AA
C257	VCCSPA1HL271J	270 pF, 50V, ±5%, CM	AA
C258	VCKYDT1HB471K	470 pF, 50V, ±10%, CM	AA
C262	VCKYDT1HB331K	330 pF, 50V, ±10%, CM	AA
C301	VCCSPA1HL151J	150 pF, 50V, ±5%, CM	AA
C302	VCCSPA1HL151J	150 PF, 50V, ±5%, CM	AA
C304	VCTYPA1EX103J	0.01 μF, 25V, ±5%, SC	AA
C305	VCTYPA1EX472J	0.0047 μF, 25V, ±5%, SC	AA
C306	VCTYPA1EX472J	0.0047 μF, 25V, ±5%, SC	AA
C307	VCTYPA1EX123J	0.012 μF, 25V, ±5%, SC	AA
C309	VCQPKA2AA682J	0.0068 μF, 100V, ±5%, Polypropylene	AB
C403	VCKZPA1HF403Z	0.04 μF, 50V, +80−20%, CM	AA
C501	VCKZPA1HF403Z	0.04 μF, 50V, +80−20%, CM	AA
C502	VCKZPA1HF403Z	0.04 μF, 50V, +80−20%, CM	AA
C504	VCQYKA1HM104M	0.1 μF, 50V, ±20%, ML	AB
C505	VCQYKA1HM104M	0.1 μF, 50V, ±20%, ML	AB
C514	VCQYKA1HM104M	0.1 μF, 50V, ±20%, ML	AB
C515	VCQYKA1HM104M	0.1 μF, 50V, ±20%, ML	AB
C702	VCKZPA1HF403Z	0.04 μF, 50V, +80−20%, CM	AA
C703	VCTYPA1EX333J	0.033 μF, 25V, ±5%, SC	AB

RESISTORS

(Unless otherwise specified, resistors are 1/6W, ±5%, carbon type.)

R101	VRD-ST2CD682J	6.8 kohms	AA
R102	VRD-ST2CD102J	1 kohm	AA
R103	VRD-ST2CD153J	15 kohms	AA
R104	VRD-ST2CD181J	180 ohms	AA
R105	VRD-ST2CD333J	33 kohms	AA
R106	VRD-ST2CD333J	33 kohms	AA
R107	VRD-ST2CD223J	22 kohms	AA
R108	VRD-ST2CD474J	470 kohms	AA
R109	VRD-ST2EE471J	470 ohms, 1/4W, ±5%, Carbon	AA
R110	VRD-ST2CD153J	15 kohms	AA
R111	VRD-ST2CD123J	12 kohms	AA
R112	VRD-ST2CD562J	5.6 kohms	AA
R113	VRD-ST2CD822J	8.2 kohms	AA
R114	VRD-ST2CD103J	10 kohm	AA
R115	VRD-ST2CD273J	27 kohms	AA
R116	VRD-ST2CD562J	5.6 kohms	AA
R117	VRD-ST2CD472J	4.7 kohms	AA
R118	VRD-ST2CD103J	10 kohm	AA
R119	VRD-ST2CD154J	150 kohms	AA
R120	VRD-ST2CD394J	390 kohms	AA
R121	VRD-ST2CD152J	1.5 kohms	AA
R122	VRD-ST2CD332J	3.3 kohms	AA
R123	VRD-ST2CD103J	10 kohm	AA
R124	VRD-ST2CD273J	27 kohms	AA
R125	VRD-ST2CD104J	100 kohm	AA
R126	VRD-ST2CD332J	3.3 kohms	AA
R127	VRD-ST2CD103J	10 kohm	AA
R128	VRD-ST2CD105J	1 Mohm	AA
R129	VRD-ST2CD473J	47 kohms	AA
R130	VRD-ST2CD154J	150 kohms	AA
R131	VRD-ST2CD274J	270 kohms	AA
R132	VRD-ST2CD181J	180 ohms	AA
R133	VRD-ST2CD273J	27 kohms	AA
R134	VRD-ST2CD224J	220 kohms	AA
R135	VRD-ST2CD223J	22 kohms	AA
R137	VRD-ST2CD152J	1.5 kohms	AA
R138	VRD-ST2CD103J	10 kohm	AA
R139	VRD-ST2CD103J	10 kohm	AA
R140	VRD-ST2CD103J	10 kohm	AA
R141	VRD-ST2CD152J	1.5 kohms	AA
R142	VRD-ST2CD102J	1 kohm	AA
R144	VRD-ST2CD473J	47 kohms	AA
R145	VRD-ST2CD471J	470 ohms	AA
R146	VRD-ST2CD561J	560 ohms	AA
R147	VRD-ST2CD820J	82 ohms	AA
R148	VRD-ST2CD273J	27 kohms	AA
R149	VRD-ST2CD102J	1 kohm	AA
R150	VRD-ST2CD181J	180 ohms	AA
R151	VRD-ST2CD333J	33 kohms	AA
R152	VRD-ST2CD223J	22 kohms	AA
R153	VRD-ST2CD333J	33 kohms	AA
R154	VRD-ST2CD223J	22 kohms	AA
R155	VRD-ST2CD474J	470 kohms	AA
R156	VRD-ST2EE471J	470 ohms, 1/4W, ±5%, Carbon	AA
R157	VRD-ST2CD103J	10 kohm	AA
R158	VRD-ST2CD333J	33 kohms	AA
R159	VRD-ST2CD222J	2.2 kohms	AA
R160	VRD-ST2CD222J	2.2 kohms	AA

REF.NO.	PART NO.	DESCRIPTION	CODE
R161	VRD-ST2CD103J	10 kohm	AA
R162	VRD-ST2CD103J	10 kohm	AA
R163	VRD-ST2CD273J	27 kohms	AA
R164	VRD-ST2CD103J	10 kohm	AA
R165	VRD-ST2CD123J	12 kohms	AA
R166	VRD-ST2CD223J	22 kohms	AA
R167	VRD-ST2CD154J	150 kohms	AA
R168	VRD-ST2CD332J	3.3 kohms	AA
R170	VRD-ST2CD684J	680 kohm	AA
R171	VRD-ST2CD153J	15 kohms	AA
R172	VRD-ST2CD181J	180 ohms	AA
R173	VRD-ST2CD392J	3.9 kohms	AA
R174	VRD-ST2CD121J	120 ohms	AA
R175	VRD-ST2CD332J	3.3 kohms	AA
R176	VRD-ST2CD222J	2.2 kohms	AA
R177	VRD-ST2CD332J	3.3 kohms	AA
R178	VRD-ST2CD182J	1.8 kohms	AA
R179	VRD-ST2CD103J	10 kohm	AA
R180	VRD-ST2CD123J	12 kohms	AA
R181	VRD-ST2CD102J	1 kohm	AA
R182	VRD-ST2CD102J	1 kohm	AA
R183	VRD-ST2CD103J	10 kohm	AA
R184	VRD-ST2CD103J	10 kohm	AA
R186	VRD-ST2CD472J	4.7 kohms	AA
R188	VRD-ST2CD152J	1.5 kohms	AA
R201	VRD-ST2CD682J	6.8 kohms	AA
R202	VRD-ST2CD102J	1 kohm	AA
R203	VRD-ST2CD153J	15 kohms	AA
R204	VRD-ST2CD181J	180 ohms	AA
R205	VRD-ST2CD333J	33 kohms	AA
R206	VRD-ST2CD333J	33 kohms	AA
R207	VRD-ST2CD223J	22 kohms	AA
R208	VRD-ST2CD474J	470 kohms	AA
R210	VRD-ST2CD153J	15 kohms	AA
R211	VRD-ST2CD123J	12 kohms	AA
R212	VRD-ST2CD562J	5.6 kohms	AA
R213	VRD-ST2CD822J	8.2 kohms	AA
R214	VRD-ST2CD103J	10 kohm	AA
R215	VRD-ST2CD273J	27 kohms	AA
R216	VRD-ST2CD562J	5.6 kohms	AA
R217	VRD-ST2CD472J	4.7 kohms	AA
R218	VRD-ST2CD103J	10 kohm	AA
R219	VRD-ST2CD154J	150 kohms	AA
R220	VRD-ST2CD394J	390 kohms	AA
R221	VRD-ST2CD152J	1.5 kohms	AA
R222	VRD-ST2CD332J	3.3 kohms	AA
R223	VRD-ST2CD103J	10 kohm	AA
R224	VRD-ST2CD273J	27 kohms	AA
R225	VRD-ST2CD104J	100 kohm	AA
R226	VRD-ST2CD332J	3.3 kohms	AA
R227	VRD-ST2CD103J	10 kohm	AA
R228	VRD-ST2CD105J	1 Mohm	AA
R229	VRD-ST2CD473J	47 kohms	AA
R230	VRD-ST2CD154J	150 kohms	AA
R231	VRD-ST2CD274J	270 kohms	AA
R232	VRD-ST2CD181J	180 ohms	AA
R237	VRD-ST2CD152J	1.5 kohms	AA
R238	VRD-ST2CD103J	10 kohm	AA
R239	VRD-ST2CD103J	10 kohm	AA
R240	VRD-ST2CD103J	10 kohm	AA
R241	VRD-ST2CD152J	1.5 kohms	AA
R242	VRD-ST2CD102J	1 kohm	AA
R244	VRD-ST2CD473J	47 kohms	AA
R245	VRD-ST2CD471J	470 ohms	AA
R246	VRD-ST2CD561J	560 ohms	AA
R247	VRD-ST2CD820J	82 ohms	AA
R248	VRD-ST2CD273J	27 kohms	AA
R249	VRD-ST2CD102J	1 kohm	AA
R250	VRD-ST2CD181J	180 ohms	AA
R251	VRD-ST2CD333J	33 kohms	AA
R252	VRD-ST2CD223J	22 kohms	AA
R253	VRD-ST2CD333J	33 kohms	AA
R254	VRD-ST2CD223J	22 kohms	AA
R255	VRD-ST2CD474J	470 kohms	AA
R257	VRD-ST2CD103J	10 kohm	AA
R258	VRD-ST2CD333J	33 kohms	AA
R259	VRD-ST2CD222J	2.2 kohms	AA
R260	VRD-ST2CD222J	2.2 kohms	AA
R261	VRD-ST2CD103J	10 kohm	AA
R262	VRD-ST2CD103J	10 kohm	AA
R263	VRD-ST2CD273J	27 kohms	AA
R264	VRD-ST2CD103J	10 kohm	AA
R265	VRD-ST2CD123J	12 kohms	AA
R266	VRD-ST2CD223J	22 kohms	AA
R267	VRD-ST2CD154J	150 kohms	AA
R268	VRD-ST2CD332J	3.3 kohms	AA
R270	VRD-ST2CD684J	680 kohm	AA
R271	VRD-ST2CD153J	15 kohms	AA
R272	VRD-ST2CD181J	180 ohms	AA
R273	VRD-ST2CD392J	3.9 kohms	AA
R274	VRD-ST2CD121J	120 ohms	AA
R275	VRD-ST2CD332J	3.3 kohms	AA
R276	VRD-ST2CD222J	2.2 kohms	AA
R277	VRD-ST2CD332J	3.3 kohms	AA
R278	VRD-ST2CD182J	1.8 kohms	AA
R279	VRD-ST2CD103J	10 kohm	AA
R280	VRD-ST2CD123J	12 kohms	AA
R281	VRD-ST2CD102J	1 kohm	AA
R282	VRD-ST2CD102J	1 kohm	AA
R288	VRD-ST2CD152J	1.5 kohms	AA
R303	VRD-ST2EE4R7J	4.7 ohms, 1/4W, ±5%, Carbon	AA
R304	VRD-ST2EE4R7J	4.7 ohms, 1/4W, ±5%, Carbon	AA
R305	VRD-ST2CD273J	27 kohms	AA
R306	VRD-ST2CD273J	27 kohms	AA
R307	VRD-ST2CD473J	47 kohms	AA
R308	VRD-ST2CD473J	47 kohms	AA
R309	VRG-ST2EC180J	18 ohms, 1/4W, ±5%, Fusible	AB
R310	VRS-PT3AB101J	100 ohm, 1W, ±5%, Metal Oxide Film	AA
R311	VRD-ST2HD221J	220 ohms, 1/2W, ±5%, Carbon	AA
R401	VRD-ST2CD472J	4.7 kohms	AA
R402	VRD-ST2CD153J	15 kohms	AA
R403	VRD-ST2CD103J	10 kohm	AA
R404	VRD-ST2CD472J	4.7 kohms	AA
R405	VRD-ST2CD103J	10 kohm	AA
R406	VRD-ST2CD332J	3.3 kohms	AA
R407	VRD-ST2CD224J	220 kohms	AA
R408	VRD-ST2CD472J	4.7 kohms	AA
R409	VRD-ST2CD272J	2.7 kohms	AA
R410	VRD-ST2CD103J	10 kohm	AA
R412	VRD-ST2CD224J	220 kohms	AA
R413	VRD-ST2CD103J	10 kohm	AA
R414	VRD-ST2CD272J	2.7 kohms	AA
R419	VRD-ST2CD472J	4.7 kohms	AA
R420	VRD-ST2CD472J	4.7 kohms	AA
R421	VRD-ST2CD124J	120 kohms	AA
R422	VRD-ST2CD104J	100 kohm	AA
R423	VRD-ST2CD472J	4.7 kohms	AA
R502	VRD-ST2CD472J	4.7 kohms	AA
R504	VRD-ST2CD104J	100 kohm	AA
R505	VRD-ST2CD103J	10 kohm	AA
R506	VRD-ST2CD472J	4.7 kohms	AA
R507	VRD-ST2CD222J	2.2 kohms	AA
R508	VRD-ST2CD472J	4.7 kohms	AA
R509	VRD-ST2CD222J	2.2 kohms	AA
R511	VRD-ST2CD104J	100 kohm	AA

REF.NO.	PART NO.	DESCRIPTION	CODE
R512	VRD-ST2CD472J	4.7 kohms	AA
R514	VRD-ST2CD332J	3.3 kohms	AA
R515	VRD-ST2CD332J	3.3 kohms	AA
R516	VRD-ST2CD332J	3.3 kohms	AA
R517	VRD-ST2CD183J	18 kohms	AA
R518	VRD-ST2EE560J	56 ohms, 1/4W, ±5%, Carbon	AA
R519	VRD-ST2CD103J	10 kohm	AA
R520	VRD-ST2EE560J	56 ohms, 1/4W, ±5%, Carbon	AA
R601	VRD-ST2CD154J	150 kohms	AA
R602	VRD-ST2CD124J	120 kohms	AA
R603	VRD-ST2CD273J	27 kohms	AA
R604	VRD-ST2CD103J	10 kohm	AA
R605	VRD-ST2CD154J	150 kohms	AA
R606	VRD-ST2CD124J	120 kohms	AA
R607	VRD-ST2CD273J	27 kohms	AA
R608	VRD-ST2CD103J	10 kohm	AA
R609	VRD-ST2CD103J	10 kohm	AA
R610	VRD-ST2CD103J	10 kohm	AA
R611	VRD-ST2CD331J	330 ohms	AA
R612	VRD-ST2CD331J	330 ohms	AA
R613	VRD-ST2CD331J	330 ohms	AA
R614	VRD-ST2CD331J	330 ohms	AA
R615	VRD-ST2CD152J	1.5 kohms	AA
R616	VRG-ST2EC180J	18 ohms, 1/4W, ±5%, Fusible	AB
R701	VRD-ST2CD103J	10 kohm	AA
R702	VRD-ST2CD154J	150 kohms	AA
R703	VRD-ST2CD103J	10 kohm	AA
R704	VRD-ST2CD472J	4.7 kohms	AA
R705	VRD-ST2CD104J	100 kohm	AA
R706	VRD-ST2CD153J	15 kohms	AA
R707	VRD-ST2CD333J	33 kohms	AA
R708	VRD-ST2CD472J	4.7 kohms	AA
R709	VRD-ST2CD822J	8.2 kohms	AA
R710	VRD-ST2CD332J	3.3 kohms	AA
R711	VRD-ST2CD822J	8.2 kohms	AA
R712	VRD-ST2EE271J	270 ohms, 1/4W, ±5%, Carbon	AA

CIRCUIT PARTS

CNP1	QCNCM439FAFZZ	6Pin Plug	AB
CNP2	QCNCM437DAFZZ	4Pin Plug	AB
CNP3	QCNCM587FAFZZ	6Pin Plug	AB
CNP4	QCNCM233DAFZZ	4Pin Plug	AC
CNP5	QCNCM585DAFZZ	4Pin Plug	AB
CNP6	QCNCM589HAFZZ	8Pin Plug	AB
CNS1	QCNW-2369AFZZ	6Pin Socket Assembly	AH
CNS2	QCNW-2366AFZZ	4Pin Socket Assembly	AH
CNS3	QCNW-2371AFZZ	6Pin Socket Assembly	AD
CNS4	QCNW-2370AFZZ	4Pin Socket Assembly	AC
CNS5	QCNW-2367AFZZ	4Pin Socket Assembly	AC
CNS6	QCNW-2368AFZZ	8Pin Socket Assembly	AE
⚠FS501	QFS-C801EAFNI	Fuse, 800mA/250V	AD
J1A,B	QJAKF0065AFZZ	Jack Assembly, Microphone	AH
J2	QJAKJ0104AFZZ	Jack, Headphones	AD
J4A~D	QSOCJ0692AFZZ	Jack Assembly, LINE IN/OUT	AE
M1	RMOTV0110AF03	Deck 1 Motor	AV
M2	RMOTV0110AF03	Deck 2 Motor	AV
SO101	QSOCD4507AFZZ	DIN Socket, Record/Playback	AE
⚠SO501	QSOCE0607AFZZ	Voltage Selector	AF
SOL1	RPLU-0175AFZZ	APSS Solenoid	AG
SW1	QSW-S0422AFZZ	Switch, Slide Type	AF
SW2~6	QSW-P0528AFZZ	Switch Assembly, Push Lock Type	AN
SW7~9	QSW-P0527AFZZ	Switch Assembly, Push Lock Type	AN
SW10	QSW-F0196AFZZ	Switch, Leaf Type	AE
SW11	QSW-F0197AFZZ	Switch, Leaf Type	AC
SW12	QSW-F0197AFZZ	Switch, Leaf Type	AC
SW13	QSW-F0196AFZZ	Switch, Leaf Type	AE
SW14	QSW-F0197AFZZ	Switch, Leaf Type	AC
SW15	QSW-F0197AFZZ	Switch, Leaf Type	AC
SW16	QSW-P0365AFZZ	Switch, Slide Type	AF
SW17	QSW-S0268AFZZ	Switch, Slide Type	AD
TE501	QCNCM552BAFZZ	2Pin Plug	AA

MECHANICAL PARTS

101	JKNBR0444AFSA	Button, Play/Stop	AD
102	JKNBR0445AFSA	Button, Rewind/Pause	AD
103	JKNBR0446AFSA	Button, Fast-forward	AD
104	LANGF0863AFFW	Bracket, Button	AD
105	LANGF0864AFZZ	Bracket, Flywheel (Deck 1)	AE
105	LANGF0864AF00	Bracket, Flywheel (Deck 2)	AF
106	LANGQ0924AFFW	Bracket, Solenoid	AB
107	LBSHZ0086AFZZ	Cushion, Motor	AA
108	————	Main Chassis	—
109	LCHSS0201AFFW	Head Plate	AD
110	LCHSZ0163AFZZ	Full Auto Base	AD
111	LDAIH0063AF00	Head Base	AD
112	MSPRT1074AFFJ	Spring, Record Sensor Lever	AA
113	LPLTM0148AFZZ	Plate, Lever Guide	AE
114	LPLTP0068AF00	Clutch Plate, Auto Stop	AB
115	LPTNP0058AFZZ	Stopper	AA
116	LX-BZ0451AFFD	Screw, 2mm Dia. × 6mm	AA
117	LX-HZ0138AFFD	Screw, Head Plate	AB
118	LX-HZ0139AFFD	Screw, PAD Lever	AB
119	LX-HZ0141AFFD	Screw, Eject Lever	AB
120	LX-HZ0143AFFD	Screw, 2mm Dia. × 8mm	AA
121	LX-WZ1076AF00	Washer, Supply Turn Table	AA
122	LX-WZ9064AFZZ	Stop Washer, 1.5mm Dia. × 3.8mm Dia. × 0.5mm	AA
123	MARMM0069AFZZ	Lever, PAD	AC
124	MARMP0024AF00	Lever, Swing	AB
125	MCAMP0060AF00	Cam, PAD	AB
126	MCAMP0061AF00	Cam, Full Auto	AB
127	MLEVF1616AFFW	Lever, Play	AB
128	MLEVF1617AFFW	Lever, Rewind	AB
129	MLEVF1618AFFW	Lever, Fast-forward	AB
130	MLEVF1619AFFW	Lever, Stop	AB
131	MLEVF1620AFZZ	Lever, Pause	AB
132	MLEVF1621AFFW	Lever, Eject	AA
133	MLEVF1622AFFW	Lever, Interlocking	AB
134	MLEVF1623AFFW	Lever, Main lock (Deck 1)	AC
134	MLEVF1631AFFW	Lever, Main lock (Deck 2)	AC
135	MLEVF1624AFFW	Lever, Switch	AC
136	MLEVF1625AFFW	Lever, APSS Lock	AA
137	MLEVF1626AFFW	Release Lever, Play Idler	AB
138	MLEVF1627AFFW	Lever, Eject	AC
139	MLEVP0482AFZZ	Deck 1 Head, Dummy	AB
140	MLEVP0502AFZZ	Lever, Pause Lock	AB
141	MLEVP0518AFZZ	Lever, Fast-forward/Rewind	AK
142	MLEVP0519AF00	Lever, Full Auto Senser	AA
143	MLEVP0520AF00	Lever, Play Lock	AA
144	MLEVP0521AF00	Lever, Stop Lock	AA
145	MLEVP0522AF00	Lever, Brake	AB
146	MLEVP0523AF00	Lever, Button	AB
147	MLEVP0524AF00	Lever, APSS Switch	AA
148	MLEVP0525AF00	Lever, Pause Coupler	AB
149	MLEVP0526AF00	Lever, Full Auto Killer	AB
150	MLEVP0553AF00	Lever, Stop Killer	AC
151	MSPRC0454AFFJ	Spring, Lever Return	AA
152	MSPRC0455AFFJ	Spring, Lever Return	AA
153	MSPRC0456AFFJ	Spring, Azimuth	AA
154	MSPRC0457AFFJ	Spring, Back Tention	AA
155	MSPRC0458AFFJ	Spring, Pause Lock Lever	AA
156	MSPRC0459AFFJ	Spring, Flywheel	AA

REF.NO.	PART NO.	DESCRIPTION	CODE
157	MSPRC0460AFFJ	Spring, Interlocking Lever	AA
158	MSPRC0461AFFJ	Spring, Solenoid	AA
159	MSPRC0462AFFJ	Spring, Auto Stop Clutch	AA
160	MSPRD0570AFFJ	Spring, Pinch Roller	AA
161	MSPRD0571AFFJ	Spring, PAD Lever	AA
162	MSPRD0572AFFJ	Spring, Head Base Release	AA
163	MSPRD0573AFFJ	Spring, Cam Lock	AA
164	MSPRD0574AFFJ	Spring, PAD Cam	AA
165	MSPRD0575AFFJ	Spring, Swing Lever	AA
166	MSPRD0576AFFJ	Spring, Full Auto Killer Lever	AA
167	MSPRD0577AFFJ	Spring, Full Auto Killer	AA
168	LX-HZ0137AFFD	Screw, Record Switch Lever	AB
169	MSPRP0370AFFW	Plate Spring, Cassette Press	AA
170	MSPRT1070AFFJ	Spring, Fast-forward/Rewind Gear	AA
171	MSPRT1071AFFJ	Spring, Playback Idler	AA
172	MSPRT1072AFFJ	Spring, Main Lock Plate	AA
173	MSPRT1073AFFJ	Spring, Switch Lever	AA
174	NBLTK0289AF00	Belt, Motor (Large)	AB
175	NBLTK0290AF00	Belt, Motor (Small)	AB
176	NBLTK0291AF00	Belt, Full Auto Gear	AB
177	NDAIR0185AFZZ	Take-up Turn Table	AE
178	NDAIR0186AF00	Supply Turn Table	AB
179	NFLYC0120AFZZ	Flywheel	AG
180	NGERH0143AF00	Gear, Fast-forward	AA
181	NGERH0144AF00	Gear, Flywheel	AB
182	NIDR-0088AFZZ	Idler, Playback	AE
183	NPLYR0106AF00	Pulley, Full Auto Gear	AB
184	NROLY0065AFZZ	Pinch Roller Assembly	AE
185	NSFTT0304AFFD	Shaft, Button Lever	AD
186	NSFTT0305AFFD	Shaft, Solenoid	AB
187	PCUSF0029AFZZ	Felt, Clutch	AA
188	PGIDP0002AF00	Lever Guide (Left)	AC
189	PGIDP0003AFZZ	Lever Guide (Right)	AC
190	RHEDF0090AFZZ	Playback Head	AM
191	MLEVF1628AFFW	Lever, Record	AB
192	MLEVF1629AFFW	Lever, Record Sensor	AC
193	MLEVF1630AFFW	Lever, Record Switch	AC
194	MLEVP0527AF00	Lever, Erase Prevention	AA
195	MLEVF1633AFFW	Lever, Record/Playback Changeover	AD
196	PSPAZ0107AFZZ	Outer Spacer, Record/ Playback Changeover	AC
197	PSPAZ0155AF00	Inner Spacer, Record/ Playback Changeover	AB
198	RHEDA0125AFZZ	Erase Head	AH
199	RHEDH0135AFZZ	Record/Playback Head	AM
200	MSPRD0597AFFJ	Spring, Stop Killer Lever	AA

CABINET EXPLODED VIEW PARTS

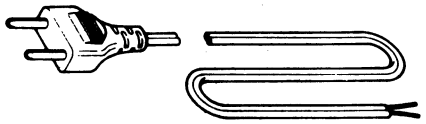
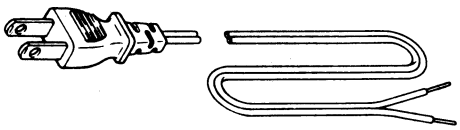
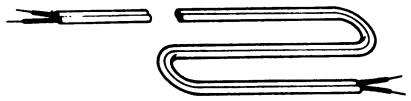
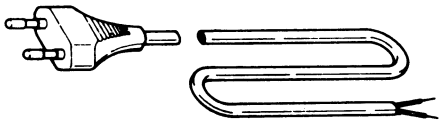
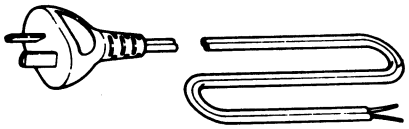
301	CPNLC1530AF01	Front Panel Assembly	AX
301-1	HDECP0165AFSA	Decoration Plate, Window	AG
301-2	————————	Front Panel	—
•301-3	PFLT-0494AFZZ	Felt, Front Leg	AA
302	GCAB-3156AFSA	Cabinet	AT
303	GCOVA1442AFSA	Cassette Cover, Deck 1	AL
304	GCOVA1444AFSA	Cassette Cover, Deck 2	AL
305	GFTAC1393AFSA	Cassette Holder	AG
306	GITAU0029AFZZ	Bottom Plate	AH
307	HDECB0252AFSA	Decoration Plate, Record Level Control	AB
308	JKNBM0428AFSA	Button, Power Switch	AD
309	JKNBM0437AFSA	Button, Push Switch	AB
310	JKNBM0457AFSC	Button, Gray	AB
311	JKNBM0457AFSD	Button, Blue	AB
312	JKNBZ0248AFSA	Knob, Record Level Control, Right Channel	AD
313	JKNBZ0247AFSA	Knob, Record Level Control, Left Channel	AD
314	JKNBZ0357AFSA	Button, Dubbing Start	AC
315	KCOUB0161AFZZ	Tape Counter	AH
317	LANGR0560AFZZ	Bracket, Power Transformer	AD
318	LANGT1280AFZZ	Bracket, Dubbing Button	AB
320	LANGT1282AFZZ	Bracket, Mechanism	AH
⚠321	LBSHC0004AGZZ	Bushing, AC Power Supply Cord	AB
⚠321	LBSHC0007AFZZ	Bushing, AC Power Supply Cord	AB
323	LHLDZ1250AFSA	Holder, Record Level Control	AD
324	LX-HZ0087AFFD	Screw, Main PWB Retaining	AA
326	MLEVF1632AFFW	Lever, Record Action	AD
327	MLEVF1634AFZZ	Lever, Dubbing	AD
329	MLIFP0023AFZZ	Dumper	AF
330	MLOKC0063AFZZ	Bracket, Holder Lock	AC
331	MSPRD0580AFFJ	Spring, Record Action Lever	AA
332	MSPRD0581AFFJ	Spring, Cassette Holder (Left)	AA
333	MSPRD0582AFFJ	Spring, Cassette Holder (Right)	AA
335	MSPRD0584AFFJ	Spring, Dubbing Start Bracket	AA
336	NBLTK0295AF00	Belt, Tape Counter	AB
339	PFLT-0405AFZZ	Felt, Leg	AA
340	PRDAR0309AFZZ	Heat Sink	AD
341	PSLDC3175AFZZ	Shield Plate, Mic. Jack	AC
342	MLEVP0533AFZZ	Lever, Switch	AC
343	LHLDW1075AFZZ	Nylon Band 60mm	AA
344	————————	Chassis	—
•344-1	LANGT1281AFZZ	Bracket, PWB	AB
345	LHLDW1097AFZZ	PWB Holder	AA
346	TSPC-1163AFZZ	Label, Specifications	AC
⚠347	QACCL0052AFZZ	AC Power Supply Cord	AL
⚠347	QACCV0001AGZZ	AC Power Supply Cord	AL
⚠347	QACCZ0053AF00	AC Power Supply Cord	AK
⚠347	QACCZ0056AF00	AC Power Supply Cord	AL
⚠347	QACCB0059AF09	AC Power Supply Cord (For UK)	AK
⚠349	QFSHD1054AFZZ	Fuse Holder	AA
350	MSPRP0319AFZZ	Spring (Plate Type), Ground	AB
351	MRODM0093AFFW	Rod	AB
352	QLUGL0152AFZZ	Lug	AD

ACCESSORIES

QCNW-0718AFZZ	Connecting Cord, RCA-Pin Type	AH
SSAKA0104AFZZ	Polyethylene Bag, Accessory (For UK)	AH
SSAKA0024AFZZ	Polyethylene Bag, Accessory	AA
TINSZ0661AFZZ	Operation Manual	AP
QCNW-0727AFZZ	Connecting Cord, DIN Type	AP
QPLGA0251AFZZ	AC Adapter	AE
QPLGA0252AFZZ	AC Adapter (For SESA)	AE
TGANE1117AFZZ	Warranty Card (For UK)	AB
SPAKC2871AFZZ	Packing Case	AK
SPAKP0461AFZZ	Polyethylene Bag, Unit	AD
SPAKA1169AFZZ	Packing Add, Left	AE
SPAKA1170AFZZ	Packing Add, Right	AE
TCAUH0056AGZZ	Caution Label, AC Power Supply Card (For UK)	AA
TCAUZ0039AFZZ	Caution Label, Polyethylene Bag (For UK)	AA
TLABJ0006AFZZ	Label, MADE IN JAPAN (For UK)	AA
TLABT0053AFZZ	Label, License(For UK)	AA

P.W.B Assembly (Not Replacement Item)

DUNTU0128AF06 (Combined Assembly)	Main/Headphones/Indicator/ Level Control/Power Switch	—

AC Power Supply Cord	Bushing	Connection		Figure
		Ⓑ	Ⓐ	
QACCZ0053AF00	LBSHC0007AFZZ	Black	Black	
QACCZ0056AF00	LBSHC0007AFZZ	Black	Black	
QACCB0059AF09	LBSHC0004AGZZ	Blue	Brown	
QACCV0001AGZZ	LBSHC0004AGZZ	Blue	Brown	
QACCL0052AFZZ	LBSHC0007AFZZ	Black	White Stripe	

AC POWER SUPPLY CORD WIRING CONNECTION

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SHARP

SERVICE MANUAL/SERVICE-ANLEITUNG/MANUEL DE SERVICE

S4576RT1010HK

- In the interests of user-safety the set should be restored to its original condition and only parts identical to those specified be used.
- Im Interesse der Benutzer-Sicherheit sollte dieses Gerät wieder auf seinen ursprünglichen Zustand eingestellt und nur die vorgeschriebenen Teile verwendet werden.
- Dans l'intérêt de la sécurité de l'utilisateur, l'appareil devra être reconstitué dans sa condition première et seules des pièces identiques à celles spécifiées, doivent être utilisées.

RT-1010H(BK)

Ⓔ

This new model RT-1010H(BK) is the same as the former model RT-1010H(S), only with a slight difference on the surface colors between the new and former ones. Therefore, the parts newly employed alone are here described, and for other details please refer to the already issued Service Manual for RT-1010H(S) (S2403RT-1010H).

Ⓓ

Dieses neue Modell RT-1010H(BK) ist fast gleich wie das vorige Modell RT-1010H(S) mit Ausnahme von dem kleinen Unterschied in den Oberflächenfarben zwischen dem neuen Modell und dem vorigen.
Daher sind nur die neu verwendeten Teile hier beschrieben. Einzelheiten sind in der bereits herausgegebenen Service-Anleitung für RT-1010H(S) enthalten (S2403RT-1010H).

Ⓕ

Ce nouveau modèle RT-1010H(BK) est identique à l'ancien modèle RT-1010H(S) sauf seulement une légère différence sur les couleurs des surfaces entre le nouveau et l'ancien. Par conséquent, les pièces nouvellement employées seules sont ici décrites et pour les autres détails veuillez vous reporter au Manuel de Service déjà publié pour le RT-1010H(S) (S2403RT-1010H).

Ⓔ Ⓓ Ⓕ

DIFFERENCE BETWEEN RT-1010H(S) AND RT-1010H(BK)

UNTERSCHIED ZWISCHEN RT-1010H(S) UND RT-1010H(BK)

DIFFERENCE ENTRE RT-1010H(S) ET RT-1010H(BK)

REF. NO.	RT-1010H(S) PART NO.	CODE	RT-1010H(BK) PART NO.	CODE	DESCRIPTION
MECHANICAL PARTS					
101	JKNBR0444AFSA	AD	JKNBR0444AFSi	AD	Button,Play/Stop
102	JKNBR0445AFSA	AD	JKNBR0445AFSi	AD	Button,Rewind/Pause,
103	JKBNR0446AFSA	AD	JKNBR0446AFSi	AD	Button,Fast-forward
CABINET EXPLODED VIEW PARTS					
301	CPNLC1530AF01	AX	CPNLC1530AF03	AX	Front Panel Assembly
301-1	HDECP0165AFSA	AG	HDECP0165AFSB	AG	Decoration Plate,Window
301-2	————————	—	————————	—	Front Panel
301-3	PFLT-0494AFZZ	AA	Same as RT-1010H(S)	AA	Felt,Front Leg
302	GCAB-3156AFSA	AT	GCAB-3156AFSB	AT	Cabinet
303	GCŌVA1442AFSA	AL	GCŌVA1507AFSB	AL	Cassette Cover,Deck 1
304	GCŌVA1444AFSA	AL	GCŌVA1508AFSB	AL	Cassette Cover,Deck 2
305	GFTAC1393AFSA	AG	GFTAC1393AFSC	AG	Cassette Holder
307	HDECB0252AFSA	AB	HDECB0252AFSC	AB	Decoration Plate,Record Lever Control
308	JKNBM0428AFSA	AD	JKNBM0428AFSB	AD	Button,Power Switch
309	JKNBM0437AFSA	AB	JKNBM0437AFSE	AB	Button,Push Switch
310	JKNBM0457AFSC	AB	JKNBM0457AFSE	AB	Button,Gray
311	JKNBM0457AFSD	AB	JKNBM0457AFSF	AB	Button,Blue
312	JKNBZ0248AFSA	AB	JKNBZ0248AFSF	AB	Knob,Record Level Control, Right Channel
313	JKNBZ0247AFSA	AD	JKNBZ0247AFSF	AD	Knob,Record Level Control, Left Channel
314	JKNBZ0357AFSA	AC	JKNBZ0357AFSD	AC	Button,Dubbing Start
327	MLEVF1634AFZZ	AD	MLEVF1747AFZZ	AD	Lever,Dubbing
346	TSPC-1163AFZZ	AC	TSPC-1400AFZZ	AC	Label,Specifications
ACCESSORY/PACKING PART					
	SPAKC2871AFZZ	AK	SPAKC3477AFZZ	AK	Packing Case

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